Gleanings in Bee Culture

October, 1947 Vol. 75, No. 10

Packing Bees for Winter

How It is Done in Vermont

By Chas. Mraz

[The writer of the following article has something over 800 colonies of bees. As wintering is a constantly recurring problem we asked him to give us his views on the subject. We here present it as one which deserves careful reading. Read also article by Propolis Pete, p. 591.—Ed.]

While it is a common practice to call packing "wintering", or refer to wintering as packing, they are really two distinct subjects. Lately much of northern wintering has been done without packing, and the question often is: "to pack or not to pack?" Usually the question is one of economics, does packing pay back its cost? Some think yes and some think no, and some don't know, but just winter as they or someone before them has always done.

Since most other features of wintering are agreed to without much argument, like those of young bees, and queens, and lots of food, the matter of packing is worthy of discussion. I believe that the trend toward no packing is going too far and that packing does have an important place in wintering here in the North.

In the excellent work done by W. E. Dunham of Ohio State University, at Columbus, he shows that over a period of 10 years, between 1935 and 1945, on a total of 172,110 colonies, the average loss for packed bees is 7.9 percent, and those of unpacked, 13.00 percent. Since these figures cover such a wide scope of both geography and methods of packing, they are accurate. It is interesting to note that in the three hard winters the difference of winter loss is 14.5 for unpacked and 5.2 for packed colonies.

Yet, if we were to consider simply the loss of colonies, the advantage of packing even in bad winters would not be worth while in dollars and cents. Nine packages could be bought to replace this loss for perhaps $50.00, and it costs more than that to pack 100 colonies. There are many other considerations that enter into the advantages of packing, and which are not immediately apparent. There can be no question that packing does save feed. How much is a question, but between five and ten pounds would not be much out of line. Another is that of spring dwindling. If the effects of wintering are carried out longer into the season, there is no question that there is some saving of colonies that die out during cold spring weather, but are not considered as winter loss.

Advocates against packing claim that packing prevents the warm winter and spring sun from enter-

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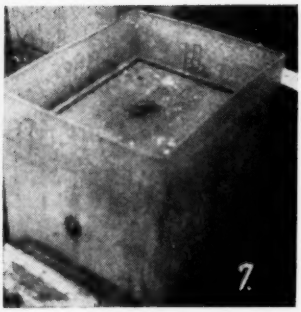
No. 1 and 2.—These hives are packed for winter by nailing ¾" Celotex to the brood chamber and food chamber. Notice the Celotex sheet used on top under the cover.. This seems to make a good packing along the upper entrance that can be seen just over the main entrance. Its only drawback is that it does not last too well and will soak up with rain in time.

ing the hive, giving the bees a chance to move to new stores or to start earlier brood rearing. The first claim is not apt to be very true in practice. It might be said that since packed bees use less honey, they do not need to move to new stores so often. The second claim, that packing prevents earlier brood rearing, is an advantage and not a disadvantage. In the northern clover areas at least, colonies that rear brood too early may be stronger for a while, but before the honey flow comes in June, they are often washed out as far as gathering a crop is concerned. They either use up their honey and starve, or pass their peak and are on the way down hill, or they swarm themselves out and lose their queens. On the other hand, packing a colony and preventing early brood rearing will conserve their stores and strength longer. They can then start brood rearing when weather and honey sources

No. 3.—This is a double board case with removable rim to go around the food chamber. The rim is higher than the food chamber to make room for a bag of shavings or other packing over the inner cover.

are more agreeable. Also, if the weather does suddenly turn cold, as it usually does in most of the North in the spring, a packed colony is well able to take care of its brood, where an unpacked colony on contracting will get some of its brood chilled. At the time of the clover flow, the slower starting colonies will be way ahead of the faster starting unpacked colonies. In fact, if it were possible, I'd like to put my bees in cold storage in the spring until May first. Where we

No. 4 and 5.—These are two common types of the "dog house" packing case. These allow for about 3" of packing between the hive body and packing case, plus about 6" on top. These make good packing cases, but are expensive to build and need good paint cover to keep from warping. In time, mice will chew holes in the corners. These hives will give good service for as long as 50 years.



No. 6.—This illustration shows the bottom and cover used with the sheet metal case. Since sheet metal is hard to get now, asphalt paper will be used. The metal sides telescope over the bottom and the cover telescopes over the sides so that parts are easily interchangeable. No. 7.—Metal case ready for packing.

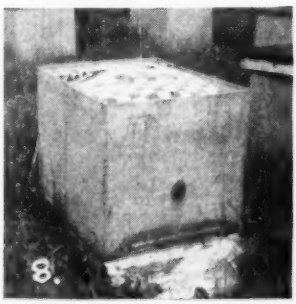
are that is plenty early for bees to get active. In 1945 and 1946, when our spring came in March, was a good example of what happens with early brood rearing. In March, the colonies were strong, gathering early pollen and honey, and in April and May we were running around with tons of sugar, trying to keep the bees from starving to death. The net result was that bees were weaker June first than they were April first.

Packing also has other advantages. It does protect the hives from the weather during the winter. In our case, where we use permanent packing, they are easier to work, and the high rim around the hive protects the bees and brood from cold winds when we look into them early in the season.

If packing does pay in your area, the question is: what kind of packing? The tar paper wrap, with or without shavings or chaff material, is common and effective, yet, while it may be cheap in material cost, it is high in labor cost. A permanent case costs more to begin with, but the labor of packing is low. Illustrated are different types of packing I have tried, with advantages and disadvantages of each.

Packing is well worth trying for any beekeeper in clover areas, even below the usual latitude that packing is practiced. When trying out packing, remember it is not only how bees turn out in spring that counts, but what shape they are in at the start of the clover flow. The effects of packing are seen up until that time. It is well to leave packing on until all cold weather is past. If supers are needed before then,

No. 8.—Metal case packed with bag of shavings on top and entrance in place. These cases are left on the hives all year around so that the bees can be packed and unpacked with a minimum of labor. The metal case is easy to build and not too expensive. No. 9.—A yard in metal cases.



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No. 10.—Hive ready for packing with hardware cloth at entrance to keep out mice, with upper entrance in hand hole. No. 11.—Board over entrance in place. This is nailed on part way so nail heads stick up about an inch. This makes it convenient to fasten the front flap of paper when it is turned under. No. 12.—Cutting the paper with linoleum knife, which is much better than an ordinary knife. Use a stick for measuring length or space the boards the correct distance from which to get the length for each sheet. No. 13.—The boards are then spaced for correct distance to fasten the ends of the sheet together with two nails. No. 14.—A slit is then made at each corner about 6" to make flaps that can be turned under the bottom of the hive to hold it in place.

No. 10-19.—The tarpaper pack. Because of its low first cost, many colonies are packed by this method. While material cost may be low, the labor cost is high. The following method, which I use, seems to be the easiest evolved so far for me, since it requires no tacking along the bottom, yet allows for three inches of packing material around the sides.

have the top packing in bags so it is a simple matter to put on a super and place the bag of packing on top. It is during spring months that packing has the greatest value.

One cannot judge the value of packing in one season. Some years there may not be much difference between packed and unpacked hives, and then in other years the difference may be terrific. Up until this spring, I seriously considered packing by simply wrapping in tar paper, but 25 colonies we tried this on last fall came through with such a terrific loss, compared to packed colonies, that my bees from now on are going to have more than just tar paper between them and our five-months' winter. Three inches of packing on the sides and five inches on top of a hive are not any too much.

Almost any kind of dry organic material can be used for packing, whichever is most convenient to get. We use dry pine shavings, as this material is easy to get here. Chaff of various kinds is good. The best, no doubt, is ground cork, but it is expensive and hard to get. Chopped straw and leaves make good material if nothing else is available. Mineral insulation, such as rock wool, should not be used, as it apparently makes poor packing. One beekeeper I know packed twelve hives with rock wool and had twelve dead colonies the next spring. That's too high a percentage to gamble on.

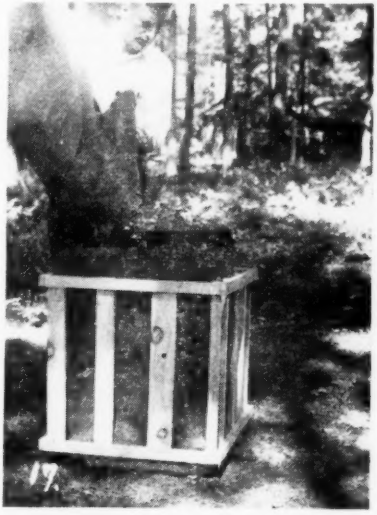
Since most hives are packed with paper, this method will be taken up first. Where a large number are to be packed, we use the truck for a platform, extending out two planks long enough to cut the size paper we want. A cross-piece is nailed

No. 15.—The paper is then placed around the hive and around the two sides and back tucked under the bottom board. In front the flap is turned over the board over the entrance, and pushed onto the nails to hold it in place. No. 16.—An upper entrance is then inserted, if desired, and it should be desired as it is a great help in wintering.

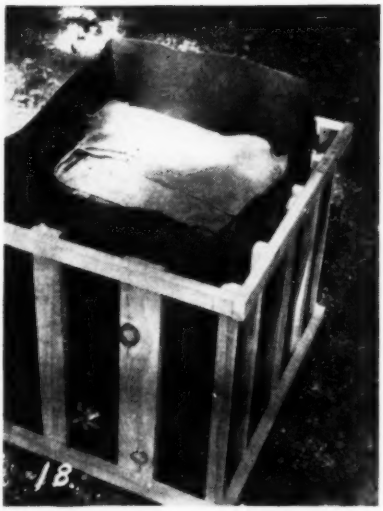
across the planks as a guide for the end of the paper, and another cross-piece as a guide for cutting. To pack a hive, three inches all around takes almost nine feet of paper, the distance between the two cross-sticks. After the paper is all cut, we then make two marks the right distance apart so that when the paper is folded and pinned together with nails it will be just the right size to go around the hive.

To save the need of nailing cleats around the bottom, the bottom edge of the paper can be folded under the bottom board, and a bridge placed over the entrance. A form should always be used to make a well shaped pack. It is a little difficult to have top entrances with paper packing, but it can be done. We leave a full size lower entrance, covering it with ½-inch mesh hardware cloth to keep out mice. For a top entrance a 1-inch hole with a tin tube through the packing to the outside works well.

No matter how it is done, paper packing is a lot of work, and many schemes have been and are being cooked up to pack with less labor. The old-time New England permanent packed "doghouses" work very



No. 17.—A form is then placed around the hive. This prevents the paper from bulging out at the sides when material is packed between the hive body and paper. Before pouring in the packing material, it is a good idea to lay an old bag over the inner cover to prevent material from getting inside the hive through the hole in the cover.



No. 18. — After packing the sides and ends with loose material, a bag of packing is placed on top. This is better than putting in the material loose on top. With it in a bag, it can easily be taken off in early spring for early examinations of the colony and then placed back on again with no extra effort. No. 19.—The cover is in place and all ready for winter. With 3" of packing on the sides and 6" on top, they are ready for any kind of weather. The regular wooden cover is better on top than a sheet of paper as it allows an air space above the packing material which prevents moisture from soaking the packing on top. In windy locations it might be better to fasten the cover down with a string rather than a stone. Binder twine is good for this.

well for easy packing. Their disadvantage is the first high cost. A lot of lumber goes into a doghouse packing case, and it must be kept painted and tight to keep it mouse-proof. Other adaptations to this type of packing are cases made with wooden frames and roofing paper nailed to it. Other methods are the Celotex hives, made in either the removable rim form or nailed directly on to the hive. I do not think these work too well, as rain will in time make a mess of the Celotex. Then there is the old Buckeye hive. While the old Root Buckeye hive has been condemned, I don't think it is nearly so bad as has been stated. If it is kept painted to prevent warping and water getting into the packing, it makes a good hive. Its big drawback is the cost again. They are expensive.

The best thing I've struck so far is a case made of galvanized sheet steel. I've used them now for 15 years and cannot think of any improvement to make on them. They are cheap and easy to build. That is, the side walls, which consist of a single sheet of 96" x 24" 26 gauge metal. We make bottom and cover of wood, and since it is only a little larger than the standard bottom and cover, it does not cost much more. The big advantage of such a permanent case is the ease of packing and unpacking, especially if top packing is kept in burlap bags. In addition, it is mouse-proof and needs no painting for many years.

Regardless of what type of packing one uses, or even no packing at all, one big mistake many beekeepers make is to have too small an entrance. The idea, I suppose, is that the smaller the entrance the less heat escapes. This is a mistaken notion. It isn't cold that kills bees in winter, but moisture. Make sure the moisture gets out and bees can stand a lot of cold, as long as their bellies are full. This is one of the big advantages of an upper entrance. It releases a lot of moisture with very little loss of heat. The full size entrance, screened to keep out mice, is none too big in areas where moisture is a problem and no upper entrance is used for winter. We like a bottom entrance ¼-inch high by at least 8 inches long, plus the upper entrance. For the

upper entrance we use a 1-inch hole bored just a little under the top of the hive body. It can be either in the upper or lower chambers. Since we use a permanent packed hive, ours is in the lower brood chamber.

There are some beekeepers, I hear, who pack their bees with Cyanogas in the fall. Personally, it looks to me like an expensive way to pack bees. It is said to save labor of packing. Maybe it does, but what a lot of labor to take care of the combs after the bees are killed. They have to be cleaned out, extracted, and stored where they may get burned up in winter. And then in spring, the labor of installing packages, to say nothing of feeding when the combs have been extracted, costs higher than any packing I can think of. It seems to me that such a system saves the labor of packing all right, but at the expense of working twice as hard getting started again with packages that don't always arrive on time or in perfect condition, or turn out too good because of supersedure.

With this little discussion to start on, some of you perhaps in the next 20 years may find the perfect system for wintering bees.

Middlebury, Vermont.

[By referring to page 594 of this issue, under "80 Years Among the Bees", there will be found further discussion of the subject of packing, but from a somewhat different angle. This means that any set of rules or methods that applies to one locality would not be adaptable to another, especially on the question of how much or how little packing material is to be used. For example, in one locality it is very dry, in another the very opposite occurs. In the damper, warmer climates, especially near bodies of water, larger exits for the escape of moisture may be required. In the dry western climates, upper entrances near the top may be smaller. As pointed out under "80 Years" the bee inspectors of the country agree that small entrances, either in packed or unpacked colonies, are a mistake. It is also pointed out, and mentioned briefly by Mr. Mraz, that the yardstick of good or bad wintering does not depend on how few stores are consumed, but how large the crop of honey. It will take more work before absolute conclusions can be drawn.

There are two more points on the problem of wintering that need repeating because of their importance: (1) Winter losses can not be measured by the number of colonies which have died during the winter period. It should not be forgotten that good normal colonies may be so weakened by the cold period that they will not be able to produce a surplus. That simply means that they are a liability and not a means for profit. (2) In most cases colonies heavily packed requiring an immense amount of labor as well as material will place the cost of such insulation above the earning power of the colonies so packed. To put it in a word, the cost of packing is more than it is worth. The tendency today among commercial honey producers is to use only a single wrapping paper.—E. R. Root.]

Dr. E. J. Dyce and wife at one of the Dyce bee yards near Senaca Lake, N. Y. The picture was taken about 4 P. M.

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Surplus Royal Food

By A. M. Southwick

On page 327 in June, 1947, Gleanings, concerning queen introduction, Allen Latham says, "I do not believe that each hive has an individual scent, nor that each queen has one.....it is the action of the queen that decides". Mr. Latham is entirely right, but has not mentioned the factors which cause a strange queen to "act as if at home" and be accepted.

We believe that the most important of these factors is the immediate and unlimited acceptance of royal jelly from the workers by the queen. A vital but smaller factor is the proximity of these jelly feeders to the queen accompanied by the separation of her from guard bees or their temporary distraction at the moment of introduction. Secreting workers are just as anxious to deposit surplus royal jelly as a herd of cows with full udders is to be milked. A queen which will not relieve them when this supply is overabundant is immediately unsatisfactory to them.

Let us explain much of the behavior of bees in terms of royal jelly production and disposition. The secreting bees want to feed the queen what royal jelly is left over after the worker larvae up to three days old are fed.

1. Swarming. Many queens can take all of this surplus as long as they have plenty of cells to deposit eggs in, but as soon as the cells to which she has access are filled with stores or brood, the queen must reduce her egg laying. This usually reduces her food intake capacity so she cannot take all the surplus. At once the secreting bees put the remainder in young worker larvae cells which are enlarged into queen cells and swarming is started. If the royal jelly surplus disappears before these cells are sealed, the jelly is removed and the cells are torn down.

2. Supersedure. Some queens from age or developing defects lose their ability to take all the surplus. The secreting bees then put the remainder in supersedure cells. If, however, there is no surplus of royal jelly above that required to feed the young larvae, colonies with such queens dwindle without supersedure.

3. Replacement. If the queen is suddenly removed or killed while there is a surplus over the amount necessary to feed the young worker larvae, the secreting workers put this surplus into young larva cells which are made over into queen replacement cells. If, however, there is no surplus over the amount of royal jelly needed to feed the young larvae, no queen replacement cells are started until the larvae are too old to make queens. Then the secreting workers consume among themselves the royal food produced, and laying workers develop.

We once had a queen in a strong healthy colony which suddenly lost the ability to lay eggs, but did not lose the ability to accept all the royal jelly food the bees had. Very soon there was no brood or eggs of any kind in the colony, but this hive was in every other respect normal and contented; no queen cells were started and no laying workers developed. The queen became very large with eating all the royal jelly produced, and the colony continued this way for many weeks. We then caged her without attendants, brought her to a strong nucleus, and put her in place of a good tested laying queen with only a puff of smoke down among the combs for introduction. The laying queen we transferred to the first hive by the same method. Both queens were immediately accepted without injury, and the first hive forged ahead with new brood, while the nucleus became broodless as the first hive had been but perfectly contented with no queen cells started and no laying workers developing. After five weeks we took the large non-laying queen from the nucleus and put her in a two - frame queenless observation hive with the same informal introduction. She was accepted and lived comfortably for several months until these bees starved in January. Apparently Mr. Root is

(Continued on page 628)

Observations Concerning Drifting

By C. A. Jamieson

Assistant Research Apiarist, Central Experimental Farm, Ottawa, Canada.

An article by Mr. Mallory in the August issue of Gleanings with reference to the drifting of bees from colony to colony, along with the editorial comment has prompted me to relate some of our observations concerning this problem.

One of our most outstanding cases of drifting occurred a few years ago. We had selected a group of 70 colonies all of which went into winter quarters with eight pounds of bees. In the early fall these colonies were shaken into prepared brood chambers. The colonies were divided into groups of 10 each with varying amounts of pollen. One of the group of 10 was wintered without any pollen.

All of these colonies were shaken again in the spring (when the first pollen was being gathered) and to our amazement one colony had 16 pounds of bees. Furthermore, this colony belonged to the group which had no pollen reserve. There were two other colonies, one having 12 pounds and the other 11 pounds of bees. These colonies were promptly removed from the experiment as they certainly had their population increased by bees drifting from other colonies. Strangely enough they were not situated in the front row but were in the center of the yard.

We have also observed that drifting is more pronounced when colonies are wintered in pairs with a top entrance. Almost invariably the colony on the west side will have more bees in the spring. Severe drifting also occurs when quadruple cases are used. One can readily understand what a handicap this problem can be to the experimenter.

Drifting also takes place during the late spring and summer. In apiaries where colonies are placed in rows the front rows gain in population from the drifting bees.

This spring we had occasion to move eight Caucasian colonies to one of our out-apiaries. Some of these dark bees could be seen in every colony in the yard, with some colonies having quite a number of them. While we anticipated some drifting would occur when we moved, the fact is there were still Caucasian bees in the Italian colonies three months after moving. There are also Italian bees in the Caucasian colonies.

I should mention we have our colonies fairly widely spaced in this apiary and there are shrubs scattered throughout the site so that drifting should be reduced to a minimum, theoretically, at least.

In my opinion the drifting of bees is one of the main factors responsible for the variation of colony populations and consequently affects colony yields.

Thus drifting presents a problem to the beekeeper, necessitating the uniting of some colonies and strengthening of others. The abnormally strong colonies may be so unbalanced that supersedure occurs, and if not, these colonies present an early swarming problem. It all adds up to higher labor costs.

I certainly agree with Mr. Mallory as to the other factors he mentions as being responsible for the variation in colony populations and consequently their influence on honey production.

Ottawa, Ontario.

Resolution by Wisconsin State Beekeepers' Association

WHEREAS losses from Nosema in package bees from the South in many cases have been very serious to Northern Producers and WHEREAS queen losses due to Nosema have also been large, be it hereby resolved by the Northern District of the Beekeepers' Association in meeting assembled at Wausau, Wis., on July 24, 1947, that we urge Southern package producers to offer us packages and queens certified to be at least 95% free from Nosema infection.

We further resolve that we will only patronize such package and queen producers and shippers.

(Signed) Ernest L. Schroeder, Pres.
Rueben Neises, Sec.

This resolution was adopted unanimously.

Beekeeping in Mexico

By Jose Alarcon Gonzalez
Taken from "Tierra"

Beekeeping in Mexico, especially among farmers, dates back to the Spanish invasion. The Spaniards taught our farmers to love this insect and they are the ones who taught our natives how to handle bees and to cut the honeycombs from the beehives and prepare the honey and wax for the All Saints season, in order to be able to use that first delicacy either as sweet, or in the preparation of bread, a custom still popular among farmers in some districts, and to use the wax in the preparation of candles used to light the offerings made around that time in memory of their dead or as a remembrance of them.

For many years only farmers and the low class people bothered with the breeding of bees. Nobody dreamed of the benefits that could be derived from these insects. Today it is different, and progressive industrialists have fully visualized the possibilities offered by bee culture.

Old Fashioned Beekeeping

One can hardly find a small or large farm without a small apiary and it is also hard to find a farmer willing to part with any of his beehives. There is a reason for it, because he will tell you that whenever he sells a hive, that will bring a jinx into his family or death among his relatives, or if he sells one box of bees, the bees of the other boxes will follow those he sold or that the saints do not like it and will punish him. We do not know whether they really mean what they say, because they have their special beliefs, but we are inclined to think that this is for many of them only a pretext because they do not like to part with any of their hives, as they know that will mean less income for them the next crop. There are others who will not sell them simply because they are attached to and love their bees. This is one of the main factors leading to success in this industry: the love for your bees.

Although every one knows that there are many bee colonies in the country, it is also a known fact that the methods used are antiquated and do neither yield the quantity nor the quality of honey one should expect. How much honey we could produce every year if these colonies were handled according to the modern methods and by professional beekeepers!

We can safely say that progressive people do not know the opportunities offered by modern bee culture in this country, except a few states like Jalisco, Yucatan, Morelos, San Luis Potosi, Oaxaca, Puebla, Veracruz, Michoacan, Nayarit, Nuevo Leon, and Guanajuato, where this industry has taken very large proportions, while in the other states we only find small or medium size apiaries.

The Importance of Refining Honey

In some states like Jalisco, Yucatan, San Luis Potosi, and Veracruz the production may already be considered as important, although it is not yet quite as large as it should be; however, the exportation of honey to foreign countries represents a figure well worth taking notice of, and we feel confident that it will continue increasing in the future.

Jalisco has a honey refining plant which must be regarded as a great asset from all points of view, especially from the way the product is put up for the market, because this is beneficial to all producers in that state because honey from that state goes to the buyer perfectly clear, without the risk of it being returned to the shipper or of having to grant a strong reduction in the price on account of the impurities it contains. It is to be sincerely hoped that all the other states, or at least honey merchants, follow Jalisco's example and submit their honey to a perfect clarification before shipping it. This will not only prove beneficial to them but will be a credit to the industry, which is now in its infancy, struggling to work its way into the world markets, thus making it necessary to supply a perfectly clear product that will build for our honey an enviable reputation.

There is a strong demand for honey the world over, both for industrial and household use as candy,

due to its delicate flavor which varies according to the kinds of flowers from which it originates and also on account of its high nourishing value, as it is a concentrated food, easy to digest, and a great producer of calories. Honey can be used instead of sugar in canning fruit, etc.

Honey Producing Capacity of Mexico

In this country large quantities of honey are wasted every year for lack of bees to gather it. The extreme abundance of nectar producing flowers and the high average of weather favorable to its production and harvest make of Mexico a country with the greatest potentiality for beekeeping. Furthermore, the great variety and quality of honey produced from a wide variety of flowers puts us in a position to produce honey of various flavors and colors and to satisfy the most delicate and exacting palates. Our superior honeys of orange and masquit flowers, with their delicious stimulating tang, range amongst the highest favorites of the world.

We have vast tropical and subtropical zones, where we may say flowers are in steady bloom, affording continuous harvesting of honey, except the short periods of respite imposed by rain, giving a nearly continuous producing season the year around. The tremendous quantity and variety of wild honey producing flowers blooming every season in these zones make them ideal for bee culture. Nature there is only waiting for somebody to set up the bee hives in order to reward him with rich and abundant nectar.

In the temperate zones also, a great variety of honey producing flowers is available, yielding honey highly appreciated in foreign markets. There is where most of the modern apiaries are to be found. Their yield of honey per colony per year is not as high as that of tropical and sub-tropical zones but is quite high and if proper care is taken of swarms, the yield can be made to be just as high. Of course this depends on the favorable flowering season of the field. We may say that in those zones there are only two crops or major harvests of nectar in the year: spring and fall, but their yield of honey is so high that they more than pay the farmer for what it costs him to keep the bees, and also leaves him a high net profit.

The cold regions are the ones where production is lowest, mostly due to poor vegetation and frost which dries the plants in the fall, when flowering is most plentiful. This yield is cut even deeper or entirely lost when early frost comes, vz. the first days of September. In spite of this many beekeepers installed in those regions have increased their colonies because they have realized the profits available in that industry.

Many Types of Beekeepers

The interest in modern beekeeping in this country is mounting steadily to the point where some people consider it as their most important business, deriving most of their revenue from the sale of honey, wax, clusters, and queens. There are other people who maintain this industry as a side line, which brings them a large revenue without demanding much attention. There are also people who started in beekeeping as a hobby, for curiosity, or the fun of it, and as they come to know bees better, their fancy for them increases, and they eventually turn their originally small apiaries into large ones, which they operate on a profitable scale.

"I'd like to raise bees.....Would one give me a start?"

Moving Honey Plants Instead of Bees

By J. E. Johnson

[When a man almost ready to celebrate his 59th wedding anniversary can write a letter for Gleanings that draws 400 replies, that is a real achievement. When he can answer more than 350 of them, then the record is little short of remarkable. What a wonderful thing it is to keep keenly interested after passing 80 years of age and continue not only to raise trees valuable for honey by the thousands, but maintain an interest in improving bee pasturage that results in invitations to go across the country to address meetings of beekeepers and horticulturalists. J. E. Johnson has been preaching about valuable honey plants and trees practically all of his long useful life. Gleanings wishes for Mr and Mrs. Johnson a well rounded five score years of life. The following interesting article our friend wrote in longhand, covering 45 pages of paper.—Ed.]

Most of the more than 350 letters which I have received following my articles in the September and November 1946 issues of Gleanings, have come from beekeepers having 10 to 50 or 100 colonies. Some, however, have come from those having thousands of colonies. I sent out all the seed I had except a little for myself, but I still have a few year or two-year-old plants. I have resolved to write one more article, taking up some of these great plants and giving a description of them, so far as my experience goes.

As I have said before, I would put the Simpson honey plant first, as being the best of all, but it has one drawback. It is very difficult to grow, for the seed is so small and slow to come up that unless the ground is clean the weeds come first. Attempting to scatter the seeds in waste land does not work well, for the weeds choke them. The plant does best in an old, half rotted brush pile or on cut-over land where brush or limbs or tree tops are left. I got my first seed from A. I. Root more than 60 years ago. Mr. Root was very enthusiastic about it but was always careful to say that he thought it would not pay in dollars and cents to plant for honey alone.

True, the Simpson honey plant is not easy to grow, but once started, fields of this and of anise hyssop, if given care for the first year, can go for several years without much attention. These two come into full bloom when clover and sweet clover are usually beginning to fail. In a fair season they will bloom for fully three months.

This shows the height of Vitex trees—trimmed so we could walk under them. Just one hum all day by busy bees.

Dr. C. C. Miller, with several hundred colonies of bees, was one of the most practical beekeepers of his day. Some years he had large crops of honey, but other years he almost failed and had to feed. Dr. Miller put in a fair patch of Simpson honey plants and was ready to reap the benefit when a very severe winter killed nearly all of it. This discouraged him on planting for bees. He lived in Marengo, the northern part of Illinois.

In 1895, I found Simpson honey plant growing wild in Stark and Knox counties along Walnut Creek and Spoon River. I gathered quite a bit of the seed and sold it to A. I. Root. Our winter there did not kill it.

I have found the Simpson honey plant superior to anise hyssop in the abundant yield of nectar, but the latter is more hardy for northern localities.

At the present prices of equipment, a beekeeper with even one

home apiary must invest a considerable amount to get started. Why should he depend upon his neighbors' fields of clover or orchards to give him a crop of honey? For many years I thought orchard locations were fine and even after the orchardist began to kill bees by spraying the blossoms, I thought they would learn better. However, I eventually had to move away from these orchard locations.

Two years ago, the bees on my 200 plants of Simpson honey plant in bloom sounded like a swarm, from early morning until almost dark. Actually, on one occasion my wife told me the bees were swarming, but when I investigated, I found they were merely working on my patch of Simpson honey plants.

I was ready to enlarge my planting both of Simpson honey plant and anise hyssop, but during our drouth in 1946 from May 30 to the first week in October, many of the roots died after two months of bloom and as a result the honey flow was not as long as in 1945. This drouth was the worst for 50 years. If we have another 49 good years, that will be fine for both Simpson honey plants and the anise hyssop. Since I am past 80, I may not see all of my hopes realized.

When one remembers the great humming of bees in a dozen basswood trees in full bloom, and how much the bees bring in during the five to ten days of bloom, what can be expected from ten acres of Simpson honey plant, with the bees roaring from morning until night during three or four months of bloom?

J. G. Steer, in the American Bee Journal for August, 1882, reported sowing Simpson honey plant seed in the late spring. It did not come up well but he got 200 plants. They blossomed in September and October. The next spring, after two or three severe frosts, he took up the roots, some of them so large that they would not go in a half-bushel measure. He divided some of these large ones that had eight or ten crowns and set them out in rows two to two and one half feet apart and one foot apart in the row. It needed no cultivation after the first year, and began blooming the first week in July. For profusion of bloom, he never saw anything like it. He saw hundreds of bees on it when not a bee could be found on clover. It secretes nectar in wet or dry weather—rain does not affect it, as the blossoms hang down. He said he had even found bees on it when it was raining too much to be out of doors. Mr. Steer planted the seed in ridges as standing water rots the seed.

In the ABC & XYZ of Bee Culture for 1880, W. T. Stewart of Eminence, Kentucky, counted the blossoms and seed pods on an average stock. He found the enormous number of 2600 blossoms and pods on the one stalk. There were four stalks in that one hill. Think what ten acres or even one acre would amount to with a continuous bloom for three months, after clover had begun to die off. Not only would the honey be valuable but the continued brood rearing builds up an enormous force of young bees.

Undoubtedly the reason why so little has been written about this wonderful plant during the last 50 years is that the seeds are so small and tiny and slow to germinate that the weeds come up first and choke it back. In order to get a start the seeds must really be planted in a raised garden bed, hand weeded, then when three or four inches high the plants should be moved to a plot of good soil and kept clean the first year. Of course, this takes a lot of time when a beekeeper is busy. This is true even though the land is waste land. With good care and cultivation the first year, this plant has almost unlimited possibilities.

In spite of the terrible drouth I have referred to last year, the seed I planted nearly two months ago is coming up now and a thousand more young plants have come up voluntarily in the old patch. After transplanting, I may have more than I had last year. This will bloom in July or at least by August 1st, and will last through September and most of October, since a light frost does not stop the yield.

Mr. James A. Simpson, Alexis, Illinois, first brought this plant to the attention of the beekeeping world and he named it the Simpson honey plant, describing it in several articles in Gleanings in 1878.

(Continued on page 632)

When Friends Drop In

By Mrs. Benj. Nielsen

Frosted honey cocoa drops.—Photo courtesy Kellogg Co.

Extracting is finished; the golden harvest is moving on to market; the children fairly settled to school routine; the bees prepared for winter; and crispy cool days revive the urge for cozy, homey visits that make the long winter evenings so delightful. The evening's enjoyment is sure to be climaxed with refreshments of some kind. Happy and serenely unruffled is the hostess who has learned to cook and bake with honey. When friends drop in, her mind never even momentarily wonders if the cookies, cake, doughnuts, or what-have-you on hand are still fresh enough to serve. Honey-baked treats remain satisfyingly fresh and the flavor actually improves.

There's nothing better than piping hot, honey-sweetened coffee to go with crispy honey doughnuts! If the company includes young fry, let them have honey-sweetened cocoa.

The recipes chosen this month lend themselves to Halloween gaiety with a minimum of special extra effort. A bit of orange cake coloring added to the frosting on the chocolate drops and a bit of the same to the honey sweetened whipped cream on the gingerbread, with a scattering of finely shaven chocolate, brings the traditional Hollowween color scheme into refreshments, too. Snap off those few remaining deep orange marigolds and those frost-resisting mums, tuck them in a gleaming black bowl—and we're all set.

Frosted Honey Cocoa Drops

One half cup bran, ⅓ cup sour milk, ¼ cup shortening, ½ cup honey, 1 egg, ¾ cup sifted flour, 1½ teaspoons baking powder, ½ teaspoon salt, ¼ teaspoon soda, ⅓ cup cocoa, and ¼ teaspoon vanilla.

Soak bran in sour milk. Blend shortening and honey until creamy; add well-beaten egg, mixing thoroughly. Sift flour, baking powder, salt, soda, and cocoa together. Add sifted ingredients alternately with soaked bran to creamed mixture. Add flavoring. Drop by teaspoonfuls onto greased baking sheets and bake in moderate oven, 350 degrees F., about 12 minutes. While still warm spread lightly with frosting. Yield: 2½ dozen cookies (2 inches in diameter).

Honey Doughnuts

One fourth cup honey, 1 cup milk, 1 egg, 2 cups sifted flour, ½ teaspoon nutmeg, 3 teaspoons baking powder, and ¼ teaspoon salt.

Mix ingredients in the order given. Roll out on lightly floured board, cut with a small doughnut cutter. Fry in deep fat and drain on absorbent paper. Roll in sugar, if desired.

Peach Honey Gingerbread

One and ¾ cups sifted flour, 1 teaspoon baking powder, ½ teaspoon soda, ½ teaspoon salt, 1 teaspoon ginger, ½ teaspoon cinnamon, 3 tablespoons shortening, ½ cup sugar, 1 egg, ½ cup honey, and ½ cup boiling water.

Sift together the first six ingredients. Cream shortening, add sugar gradually, then beaten egg and honey. Add dry ingredients. Mix thoroughly. Then add boiling water. Beat well. Pour into two greased layer cake tins. Bake in moderate oven, 350 degrees F., for 20 to 30 minutes. When ready to serve, put honey - sweetened whipped cream and sliced peaches between layers and on top. Serves 8 to 10.

Aurora, Nebraska.

Live and Learn

By Propolis Pete

Another thing on which most beekeepers disagree is the matter of caring for bees in winter time. If this is going to be your first winter with the bees, it is about time that you begin to make up your mind what you are going to do.

No matter which s c h o o l of thought appeals to you, more beekeepers will disagree than in any other phase of beekeeping. In the broadest sense, there are only two things for you to do. Either protect your bees, or leave them to nature. If you leave them to nature, you do nothing. And it is surprising how many beekeepers do that. They do nothing whatever. They don't go near the bees from the time they extract until it is time to put on supers in the spring.

Those who do something about wintering are a vast majority. It is in the degree of their preparations that there is so much controversy. Their preparations range all the way from simply seeing that the bees are adequately supplied, up to and including the moving of their colonies to an elaborately arranged cellar for complete protection.

I cannot tell you, nor can anyone else tell you, which is going to be the best way for you. You have to use your judgment, basing your decision on the general weather in your neighborhood, the amount of natural protection from the wind that the hives can get, the timing of the last honey flow of this year and the first one next year. First of all, and by far the most important, you have to leave enough honey and pollen for the bees to use during the winter, and well into the spring. This is elemental. Where most beekeepers fall down is their under-estimation of the tremendous amount of stores a strong colony of bees can consume until the spring flowers and spring weather permit them to gather more than they consume.

Winter feeding is not practical. You have to leave enough for the whole period. Of course, you can help out in the spring, after the weather warms up, by giving the bees sugar syrup and a pollen substitute. I don't think that such feeding is half as effective as leaving enough for the bees right at the start. That is not a vote against stimulative feeding in the spring. Stimulative feeding is something e n t i r e l y different. Stimulative feeding of a colony badly weakened by lack of stores during the worst part of the winter to my mind is a waste of time and money. It is rarely that such a colony picks up in time for a good crop, unless the flow is so late that the bees can overcome their handicaps.

I don't think that I have ever seen a colony that froze to death. But, unfortunately, I have seen colonies that STARVED to death because the bees were so sluggish that they could not move to their stores. So be sure that the bulk of the honey that you leave is in the top of the hive. I have lost colonies that died out with plenty of honey in the hives simply because the bees could not move DOWN to stores because they were so sluggish from the cold.

Some beekeepers practice wintering in an insulated case, the theory being that the heat produced by the bees would help to keep them warm. Exhaustive tests have proved that there is little heat outside the cluster, even in such a packed hive, and the heavy insulation helps to hold in the moisture, especially if there has been no provision for upward ventilation. But many beekeepers have wonderful r e s u l t s when they pack this way. Who am I to condemn the practice when there is so much proof to the contrary? But my private opinion is that their successful wintering is in spite of, and not because of, the heavy insulation. Their success is the result of other favorable factors not recognized by the beekeeper.

The reason I have that opinion is because I used to pack heavily. Being naturally lazy, the packing became less and less as the years rolled by, until one year darned if I didn't forget the insulation completely in one hive. I had it nicely packed with a wooden case around the hive, but forgot to put in the

(Continued on page 631)

American Honey Institute News Notes

Mrs. Harriett M. Grace, Director
Commercial State Bank Building
Madison 3, Wisconsin

October 26 through November 1, the last week in October, is NATIONAL HONEY WEEK. Everyone will want to take advantage of this wonderful opportunity to give Honey extra publicity and to promote the use of Honey.

This is a good time to get new Honey customers. Make sure that Honey is available to them; that it is on the market shelves where it will attract attention. Distribute leaflets and books of Honey facts and recipes. Don't delay—order today the literature you will need for NATIONAL HONEY WEEK.

* * * * *

Magazines of national circulation have been giving NATIONAL HONEY WEEK a good build-up. The September issue of **Woman's Home Companion** included a two - page picture in color of a meal featuring Honey-Glaze Ham.

The "Recipe of the Month" chosen by **Practical Home Economics** was a Honey Orange Cake, beautifully illustrated in a full-page photograph.

* * * * *

Mark your Honey calendar with a red circle around October 30. That's the date of the "Crime Photographer" radio program that will feature Honey publicity. Tune in at 9:30 P.M., Eastern Standard Time.

* * * * *

We have received so many orders for our nutritional bulletin, **Honey**, that another printing is being made. This booklet contains facts about Honey that everyone in the Honey business should know; facts that should be passed on to every Honey user.

* * * * *

More news from our literature department concerns the attractive six-page leaflet, **Make Every Meal a Guest Meal with Honey Recipes.** The convenient size and shape of this leaflet, which fits neatly in the top of a five-pound Honey pail, has created such a demand for it that a revised edition is now on the press.

* * * * *

Ever since the publication of NEW FAVORITE HONEY RECIPES, there has been a flood of congratulatory letters coming to the Institute. Each letter is different from the others, pointing out some feature of the book that is especially important to the writer. For example, this is what an important West-coast food broker has to say:

"I have before me your **New Favorite Honey Recipes**, and I am very much impressed with this recipe book, not only from the standpoint of the recipes therein but its potentiality in building up a demand for the sale of honey, which is evidently one of your Institute's foremost thoughts. I am wondering if these recipes are available for distribution through stores to their customers."

* * * * *

In the last analysis, women, of course, pass final judgment on the value of a recipe book. That is why we are especially interested in what women are saying about NEW FAVORITES. One woman who has just received her copy is in charge of a large cafeteria. As her hobby, she collects all kinds of recipe books. After spending an entire evening looking through NEW FAVORITE HONEY RECIPES, she decided: "Regardless of size, this is the most beautiful and practical recipe book that I have—and I don't know any book I do not have!"

* * * * *

Jack-o-lanterns may seem more in season than Santa Claus, but we are already receiving orders for recipe books to be given as Christmas gifts! Either OLD FAVORITES or NEW FAVORITES or both together make an attractive gift that is useful too. To those who wish, we will furnish plain envelopes for the books, at cost.

* * * * *

Some people are wishers. They wish on the first star at dusk, on birthday candles, on chicken wishbones, on white horses along the roadside, on wishing - wells. The members of the American Honey Institute are not wishers only, but doers. They know that this crucial period in the economic situation calls for more than wishes; it calls for action. They support an active and effective organization that is constantly striving to create a better market for all honey producers.

Annotations

By Prof. A. Z. Abushady
United Nations, New York

Bee Culture and Research in U. S. A.—The Annual Report of the General Association of the British Association for 1946 just distributed is a most interesting document and an excellent record of educational proceedings. Amongst the interesting contributions presented is one by the noted British scientist, Dr. C. G. Butler, on his recent visit to the U. S. A., for which American beekeepers should be grateful. As an honest, meticulous researcher, Dr. Butler not only recorded the facts that render justice to this country, but presented them in such a way as to be a stimulant to the cause of reform in Britain. Altogether, his lecture as reported is the finest appreciation of its kind that I have ever read of American bee culture methods and research, and deserves reprinting in American bee papers. Its wealth of observations certainly call for this action in order to make American beekeepers realize the present state of development and the future prospects of research.

American Teaching. — Nevertheless, it is a pleasure to refer here to some of his salient points, amongst which American teaching of beekeeping is given prominence. Dr. Butler emphasizes the greater thoroughness of teaching in this country and presents an array of distinguished teachers and specialists of world - wide reputation. This should fill Americans with pride and urge them to seek substantial endowments for greater developments.

Federal System of Disease Control.—On the other hand, Dr. Butler rightly observes that the lack of a federal system of disease control, leaving each state to legislate for itself, has led to the expected result of having bee disease control very much more thorough in some states than in others. He points out that in those states where the destruction policy is strictly enforced the incidence of AFB has been very markedly reduced and a really high measure of control has been achieved. Unfortunately, many American bees, including the queens, are heavily infected with Nosema disease, which he describes as a scourge equivalent to acarine disease in Britain, frequently responsible for premature and quite unexpected queen supersedure, spotted brood, etc. This is a discouragement or deterrent to the overseas trade in American queens. On the other hand, Acarine disease is unknown here, hence the strictness in supervising the importation of bees from abroad.

Value of Sulphonamide Treatment.—Whilst regretting rash and hasty claims, emphasis is laid upon Dr. Sturtevant's suggestion that the retarded germination of the spores of B. larvae for a few hours, through the influence of sulphonamide administration, provides a sufficient time to carry the larvae over the very limited infective period of their lives.

Selective Breeding and Resistance to AFB.—The investigation by Park and Pellett showing the existence to a considerable degree of naturally resistant strains of bees to AFB is equally emphasized, this resistance has been clearly demonstrated to be genetical, a hereditary character. Yet such strains are often comparatively vicious and non-productive. Selective breeding by artificial insemination (using the improved laboratory technique of Mackensen and Roberts) is hopefully thought of in immune and productive bee breeding.

Wax Moth Attacks Weaker Colonies.—It has been noted that wax moths will sometimes attack combs in a hive occupied by a colony that has been weakened by disease. Such colonies should be examined carefully for disease.

80 Years Among the Bees

By E. R. Root

One of my father's greatest mistakes was on the general subject of wintering, in which he believed that bees need blankets and overcoats, the same as human beings. He was not alone in drawing this conclusion. One had only to feel with one's hand under the packing how nice and warm it was and how snug the bees appeared to be. But A. I. Root and his followers did not know that bees, unlike human beings, were cold - blooded animals and could stand a temperature of from 96 degrees down to 46 and yet be in comparatively normal temperatures during most of the winter. Human beings must have overcoats or blankets, be warmly housed, and provided with artificial heat to keep the body temperature around normal—98.6°

A. I. Root and all the rest of us in all our thinking and all our practices at the time fell into the error of overdoing a good thing. James I. Hambleton, head of Bee Culture Laboratories, made a statement to the effect that we should pay more attention to what we put inside a hive and less of what we put around it.

If these facts had been known in the earlier days, serious winter losses might have been avoided and along with it constant dysentery spotting of the hives in early spring.*

In a word, the factors that insure safety to warm-blooded animals are clothing, housing, and fresh air. Bees survive comfortably, packing or no packing, when there is plenty of ventilation by means of two entrances so that the air can pass upward and out, laden with moisture. It is the moisture plus too small a cluster, or a high Nosema infection under periods of long confinement, that causes dysentery, rather than poor food. We now know that healthy bees do not have dysentery if their numerical strength is high enough so that the colony can generate its own heat and thus protect itself. We know that bees will winter on all kinds of honey if well ripened and sealed in the comb—the one exception being honeydew honey. Even then we have known bees to winter well on this product if it is well sealed.

Langstroth saw all this although he did not know the difference between cold and warm-blooded animals. As early as 1882 he saw that a colony without a bottom board would winter better than a colony warmly packed with a limited entrance because fresh air could get to the cluster.

Right here is where most of the mistakes have been made in wintering, contracting the entrance down to a smaller space with the bees suffering for the want of fresh air and from moisture that cannot escape.

From the above one should not draw the conclusion that packing is never necessary. It is beneficial under many conditions, and in general, one may say that when the packing is kept dry by the escape of

*At this point some explanation should be made. In most localities during the warming-up period, when the hive is heavily packed, this warm air or sunshine does not penetrate to the cluster so that it does not expand nor contract, as would be the case with light packing or none at all. The sun's rays can then penetrate the walls of the hive, reach the cluster, at which time it will expand or break altogether, then when the colder period comes on, the cluster will contract as before. But during this expansion and contraction a little brood rearing will start and this is perfectly normal, says Dr. Farrar, U. S. Bee Culture Laboratory, Madison, Wisconsin. Some authorities advocate heavy packing and believe the cluster should be kept in compact form as nearly as possible, and that there should be no brood rearing. Our best authorities now agree that temperature changes that agitate a cluster during mid-winter are natural and also unavoidable. Down through the ages the bees have been able to adapt themselves to this change of weather conditions which encourages brood rearing to a very limited extent, first in January for the northern part of the country, then a little in February, and finally in March or April when it reaches large proportions.

Packing, as explained elsewhere, is beneficial at times and harmful at others, and simply means this: that a colony in a single-walled hive may have in the spring more brood than a colony heavily packed (if both have reserve pollen within reach of the cluster)—more brood means more bees—and more bees mean more honey. A single-walled hive may have more brood than one heavily packed with a restricted entrance and the packing material wet. It would therefore appear that agitation, whether from a warming-up period or sunshine, is a perfectly normal condition.

moisture, good wintering should follow.

On the other hand, there are not a few instances where packing does more harm than good. It soaks up with moisture, freezes, and then is worse than nothing. A. I. Root had his heaviest loss in 1881 and 1882 when the bees were warmly housed and covered with 8 inches of chaff cushions. He lost all but nine of his 100 colonies. Many of them had dysentery and yet they were heavily packed, but lacked sufficient ventilation.

It also may happen that an unpacked colony may secure a crop of honey while one packed may barely survive. It is so important that I wish to repeat that the sun cannot penetrate through the packing, thus permitting the cluster to break and reform when the sun shines on it. This breaking of the cluster starts the bees to breeding and the colonies that start breeding when the sun shines may have more brood and more bees than a colony heavily packed, where the inside temperature cannot change because the walls prevent the warmth of the sun from reaching the cluster. It therefore remains in a dormant state and consumes less honey. In former days we supposed the criterion of good wintering was a saving of good stores, while, in fact, it may be the very opposite.

Strangely enough, there are some beekeepers who stick to the old idea of heavy packing. The real truth is that insulation is both beneficial and harmful. When the temperature falls it is beneficial but when the temperature raises it is harmful. The gain too often does not equal the loss.

When A. I. Root lost all but nine of his 100 colonies he found that he could buy more bees to put in the hives by going to some of the old farmers. One man, Mr. Shook, wintered black bees successfully in box hives with big knot holes and cracks around the sides so the bees had plenty of fresh air. The box hives had a brood nest a little larger than that furnished by single hives, and about the same capacity as a two-story 8-frame Langstroth hive. A. I. thought the black bees were hardier and therefore could winter where ordinary Italians would die. In this he was mistaken for it was not the race of bees but the type of hive which provided for the escape of moisture. None of the box hive men saw this point but their lumber was poor, there were knot holes, and it was because of this ventilation that the bees survived. At this point Josh Billings would say, "What's the use of knowin' so much when so much you know ain't so".

There might have been more honey produced in those days if the beekeepers and the scientific men had known the importance of large colonies supplied with a large amount of ventilation—upper and lower entrances. It took nearly 20 years for the true light to come out. No little credit is due James I. Hambleton, head of Bee Culture Laboratories, Washington, and to a member of his staff, Dr. C. L. Farrar, Madison, Wisconsin.

BEE KEEPERS TAKE NOTICE:
It has been suggested to supplant rabbits with goats in bee yards to keep the grass down—
IN A MOMENT!
LOOKING FOR THE QUEEN
HA! HA! HA!

Sent by Chas. E. Johnson, Canton, N. Y.

From the Field of Experience

Unusual Bee Behavior at a Knot Hole

By Alice M. Darst

The attractive knot hole does not show in the picture, but it is there, near the top of the cluster of bees. This swarm came here on the 8th of June. Two weeks later a smaller swarm came and took possession of the knot hole, around the corner, marked "x" on the picture.

As I have been interested in bees for a number of years a neighbor told Mrs. Davis, the owner of the shed, that I could show her how to get the bees into a hive. I told her that I had had no experience along that line, but suggested that she place a hive near the knot hole, putting in it frames with foundation with a little honey for bait. This she did but the bees passed it by.

One day I went down taking a bee escape to prevent the bees from entering the knothole. I also took a frame from one of my hives that contained brood and a capped queen cell. I parked my car near the building and we were standing there discussing the situation, when lo and behold, here came another swarm and took possession of our hive in just a couple of minutes. Mrs. Davis' husband looked at me and said, "Did you send them?" I didn't, but we carried them over in the garden and they really have gone to work. They have a nice lot of white clover to work on and it looks as if they will make Mrs. Davis a little honey this year.

Needless to say Mr. and Mrs. Davis have the bee fever and so prepared another hive to get the bees from the building. The bee escape works and the new queen is O. K.

The knot hole attractive to bees is covered by them.

The bees in the hive have drawn out several of the frames of foundation and are storing a little honey but when the hive is moved at night, almost 300 feet, the next morning bees return to the knot hole. Mr. and Mrs. Davis are tenants and think the landlord will object to having the weather boarding taken off to get the bees out of the building. They don't want to use smoke and spoil all of the honey they think is there already.

Dayton, Ohio.

* * * * *

Getting Rid of Ants

By Wm. A. Sears

I used to be bothered with ants and have had the space between the inner cover and the outside filled solid with ants and their eggs. I discovered that a little dehydrated lime sprinkled on the inner cover would drive them away, and they will stay away with one treatment for years. It's easy and costs only a fraction of a cent for each hive.

I sprinkle a little on the inner cover from a salt shaker about like one would put salt on potatoes for eating. Dump the ants and eggs out first and then use as a preventive.

We guarantee results "or your money back".

Leon, Kansas.

Coaster Wagon for Hauling Supers

By Ernest Finn

Circumstances made it necessary for me to locate my apiary on one market gardener's property and store my supers and other equipment on another's, two doors up the road. From the apiary to the storage shed was a distance of about a quarter of a mile by road. I had no horse and wagon nor a car, and it was too far to carry my equipment piece by piece, so I had to use the only other means of conveyence available, a 20-year-old coaster wagon!

Naturally if I had used it as it was, I could only carry two supers at a time, and these would probably have kept falling off, so I made a rack to fit it. Owing to the narrow, and also short, wheelbase, it was necessary to turn corners carefully and also to avoid as many bumps as possible, but the wagon and rack have been used successfully three summers and seem to fill the bill admirably. It is, of course, necessary to load it in balance to lessen the tendency to tip over.

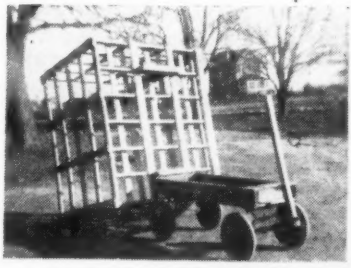
I have carried as many as twelve supers of drawn combs in it at a time and, in the fall, have had it piled as high with cartons full of leaves for packing as would stay within the rack.

The cost was exactly nothing, except my labor, as the lumber for the rack was ripped from boards from a couple of packing crates which were going to be burned, anyway, Even the nails were salvaged!

The rack was not fastened to the wagon in any way. All that holds it in place are two blocks, protruding from the bottom of the rack at each end, which exactly fit the inside width of the wagon, and the distance over their outside edges exactly fits the inside length of the wagon. Should the wagon be needed for another purpose, the rack can be slipped off, as shown in one of the pictures. As a matter of fact, I lift it off after using it every time, because it happens to make it more convenient for storing that way.

Three sides of the rack are nailed to the bottom and to each other, but the other one is held only by two grooves and two pairs of hooks and eyes. This is a great convenience when loading. A hook of spring wire holds the handle up when not in use, to keep me from falling over it.

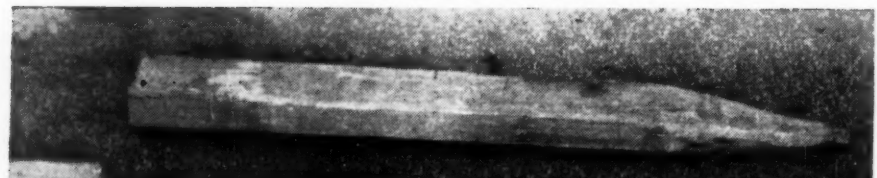
Toronto, Canada.



The rack sets over the wagon and by proper piling of supers is perfectly balanced.

The Everlasting Cypress

By H. H. Root



Red cypress post with section sawed out to show absence of rot after 40 years in the ground.

According to a newspaper clipping, sound cypress has been dug up from where it was imbedded in the earth, geologists estimate, 300,000 years. According to my calculations, they have made an error of a hundred years. However, I can't prove it. Anyway, beekeepers worrying about their grandchildren a hundred thousand years from now ought to use cypress for their beehives so they won't be falling apart and having to be renewed in 101946. Surely, it will last that long as newspapers are nearly always one third right.

It is too bad to dampen enthusiasm by pointing out that a beehive isn't under the ground but above it and that the flat grain of cypress wood doesn't always stand up well under the sun. A cypress bottom board is a good thing but one made of silver is easier to get, doesn't cost much more, and silver lasts until it is spent.

Forty years ago I was married; that seems a very long time to one or two of us. The first year I built a trellis for grapevines, using posts of red cypress 2½ inches square, driven into the ground about 18 inches. Before driving the posts, I gave them one coat of paint.

I recently took down half of the trellis to make room for a driveway. The ends of the posts were sound as was the wood at the surface of the ground. The rest of the posts are still in the ground, starting on their second forty years.

I sawed down through one of the posts I pulled out. I didn't make a very good point then, and perhaps not now, but that red cypress post with only one coat of paint did not rot very much in the forty years, under the ground, at the ground line, or above.

Medina, Ohio.

How to Manipulate a Colony

By Jonathan Gell

Here is a suggestion for examining colonies quickly without crushing a lot of bees and stirring them up. Remove the second frame from either side, and after examination place this frame near the front of the hive so that the bees may crawl back in. Examine the first frame, then replace it. Then lift out No. 3 and replace in the space left by No. 2. Continue in this manner (putting 4 in space 3, etc.), putting frame 10 in its own place. This leaves 9 empty; replace frame 2 in this. Hives heavily propolized are very easily done by this method because you have room to manipulate the tool and put your fingers in the empty space. This does not disarrange the disposition of honey, pollen, or brood very much either.

Philadelphia, Pa.

Second Glances

By C. M. Isaacson

Pleasure in beekeeping is much a matter of noticing "little" things. Clarence Tontz does, and records them in his notebook so as to share his pleasure with others(page 514). I like, too, his mention of his small home apiary to play with, but might mention that those colonies with which I can spend that extra time "for fun", nearly always produce a larger crop. I heard a beekeeper once say that if a man worked a yard every day, he could always find something that needed doing and there really is considerable truth in this.

The experimental colonies shown on page 515 demonstrate that constant "monkeying" with colonies does them no appreciable harm. So satisfy that curiosity if you wish—it won't kill the bees!

Perennial honey plants capable of dependable nectar secretion are not too plentiful, which helps to explain the great interest that Henry Freud found in rosemary. Judging by his description, the plant would be a real boon to regions where it can be grown (page 516). I am sure, knowing beekeepers as a class, that it will be tried widely in the next few years.

Building of burr comb varies both with strains of bees and intensity of honey flow. If not crowded, some strains of Italians will fill supers nicely and almost clean of burrs. I believe the darker races are perhaps a bit more apt to use burr and brace comb, but all races will do so if room is not supplied in time (page 518).

Adult bees are the infection carriers of AFB, says L. F. Childers (page 520). In what manner—through the honey they carry or the bees themselves? This report says "in the bee itself". Perhaps a bacteriologist can supply the correct answer. It is important.

Norwegian beekeeping was hard hit during the war and German occupation, Rolf Lunder reports, but he also reports the ability to bounce back that beekeepers as a class have always seemed to have had (page 522). His article is very comprehensive, yet concise, and one has a pretty good idea of Norwegian beekeeping after reading it, both through the text and the clear pictures.

A September honey flow is a thing to be dreamed of (and fondly) for our northern localities. We often have a minor one but seldom the super-filling kind which makes Mr. Weilacher's account all the more interesting. But doesn't his story of the season show once again that it always pays to take care of the bees, no matter how adverse thinks look. From spring until fall —they MAY gather a crop....! (page 528).

Good equipment is worth while, even for a small apiary. And that advice of Propolis Pete's — "Don't leave your bees short of honey", cannot be repeated too much or too strongly. It is probably the first principle of successful beekeeping.

That new recipe book is indeed a **very** well put up one. The Honey Institute Notes do not exaggerate a bit. (page 531). And re-read that one short paragraph—"The American Honey Institute serves the entire honey industry. It stands ready to serve you too". It does. Now, more than ever, we need that service, made possible by **our** support.

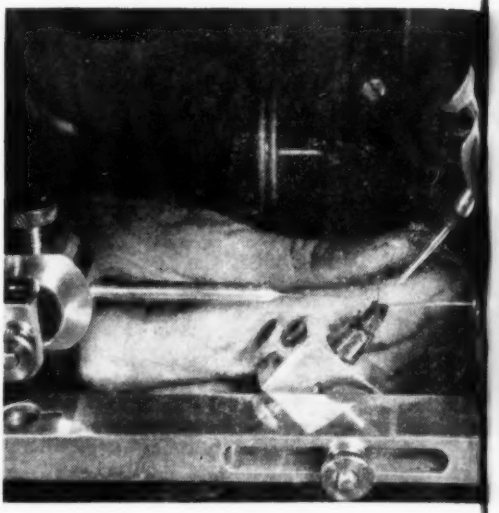
Capping melters are in very wide use by most commercial beekeepers. Most claim that the honey is not noticeably darkened, but W. B. Bray makes the claim for his New Zealand type melter that the resulting wax is not propolis contaminated (page 532). This certainly will mean a better wax for all purposes. Many apiarists would like to know as to the speed of these melter ovens, though — that often means much.

Does a queen choose — or is it rather that the worker bees of control age do the choosing? I have always believed the latter. A queen is often among the last to leave the hive with a swarm, for instance—almost never first out as far as I have observed. She is not a ruler but a part of a coordinated machine (if one can use this term for a colony of bees). She receives special treatment because she has a special work to do (page 537).

Thief River Falls, Minnesota.

XUM

Gas-Treated Virgin Queens Produce Drones



B.—Position of queen and use of valve-fold probe with inserting syringe. of apparatus.

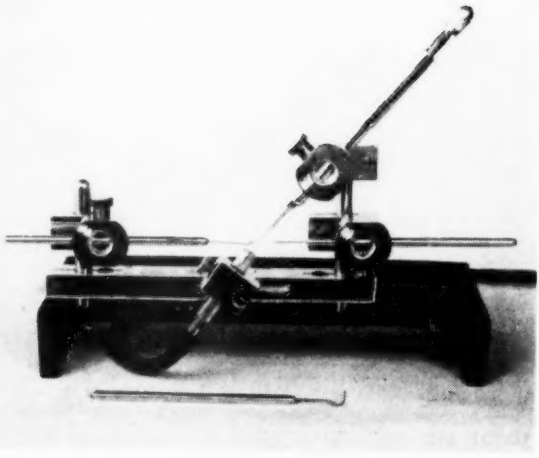
B.—Position of queen and use of valve-fold probe with inserting syringe.

Discovery that subjecting unmated queen bees to a carbon dioxide gas anesthetic causes them to lay eggs which later hatch into drone bees makes possible a rapid speeding up of production of strains of hybrid bees in which parentage is absolutely controlled, the United States Department of Agriculture reports.

The ability to produce hybrid bees may be as important for beekeepers as the development of hybrid corn has been for corn growers, the Department believes.

The carbon dioxide treatment and the development of standard apparatus and equipment for the artificial fertilization of bees have been worked out by entomologists of the Department's Bureau of Entomology and Plant Quarantine in cooperation with the Wisconsin and Louisiana Agricultural Experiment Stations. This development has now reached the stage where the Department of Economic Entomology of the College of Agriculture of the University of Wisconsin has arranged to have the equipment necessary for the artificial insemination of queen bees by the carbon dioxide method produced for sale to institutions and individuals throughout the world.

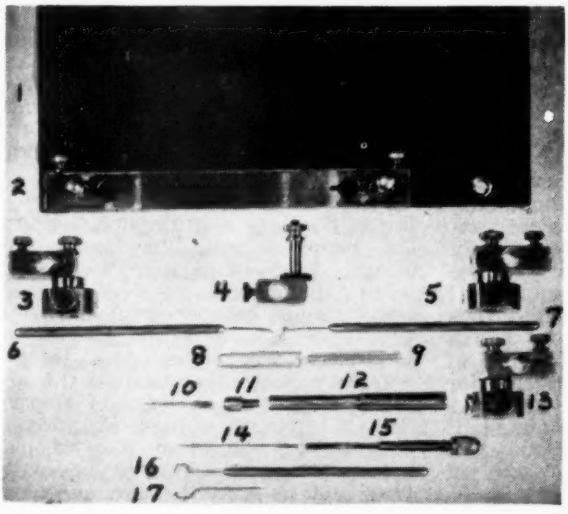
"The carbon dioxide treatment which also stimulates egg laying in mated queen bees is an indispensable tool in the controlled mating of bees by artificial insemination because it speeds up the process of inbreeding of bees," says J. I. Hambleton, in charge of the Bureau's Division of Bee Culture. "Until the discovery some years ago that artificial insemination of bees was feasible it was practically impossible to maintain pure blood lines of bees. The artificial insemination technique gives complete control of breeding. With the carbon dioxide stimulating egg laying of unmated queens, it is practicable now for the bee breeder to develop definite blood lines. Under normal circumstances an unmated queen bee mates with a male (drone) bee from her own or a near-by colony. By artificial insemination a male especially selected by the breeder can be used for her mate. With the carbon dioxide and artificial insemination method even a son of an unmated queen can be used for mating pur-



C.—Front view of apparatus for right-hand operation.

poses, thereby making possible closer inbreeding."

Development of controlled hybrid strains of bees promises to give the bee industry strains of bees high in honey production, strains particularly good for pollinating fruits and other crops, strains adaptable to different climatic conditions or otherwise adapted for special requirements.



D.—Unassembled part of apparatus.

Beekeepers of the U. S. in 1946 produced an estimated 214 million pounds of honey.

Major credit for these recent developments in the Bee Culture field go to two Department entomologists working with State experiment stations. Dr. Otto Mackensen, stationed at the Louisiana Experiment Station, discovered the effect of carbon dioxide in stimulating egg laying in queen bees, and he, with Dr. W. C. Roberts, stationed at Wisconsin Experiment Station, further refined the apparatus used in artificial bee breeding to the point where the equipment can be readily produced and made available generally.—U. S. Department of Agriculture, Agricultural Research Administration, Washington, D. C., Sept. 11, 1947.

Unassembled parts of apparatus: 1. Base. 2. Foundation bar. 3. Mounting block for sting holder. 4. Mounting block for queen holder. 5. Mounting block or ventral plate holder. 6. Sting holder. 7. Ventral plate. (sternite) holder. 8. Plastic queen holder. 9. Plastic stopper for queen holder (also delivers CO_2). 10. Plastic syringe tip. 11. Syringe head with rubber dam for plunger seal. 12. Syringe barrel. 13. Mounting block for syringe. 14. Syringe plunger. 15. Syringe turning screw with coupling and universal joint. 16. Valveford probe for right - hand operation. 17. Valveford probe without handle for left-hand operation.

The metal parts are Duraluminum with brass fittings. The base is channel steel with black crackle finish. Leather washers are used in 3, 4, 5, and 13 to provide free movement but positive position. Parts 3, 5, and 13 also have screws with rubber seats for tension adjustment.

A Talk to Beekeepers

By M. J. Deyell

Away From It All

Sometime during the year, each of us should try to take a vacation, or get as far away as possible from his regular work for a few weeks. That is what I did from August 23 to September 7. I have a daughter living in Oakland, California, so had a good excuse to see at least a small part of that wonderful state. And if you think it isn't a marvelous state, just ask some Californian.

My journeyings there were restricted to a comparatively small area east and south of San Francisco. Those redwood trees, the two bridges, the Golden Gate and Bay Bridges, are surely worth seeing. As I stood gazing up at those enormous trees, one of them about 100 feet in circumference around the base, and over 5000 years old, I experienced a strange feeling way down inside of me. I wanted to say something but couldn't find the words to say it.

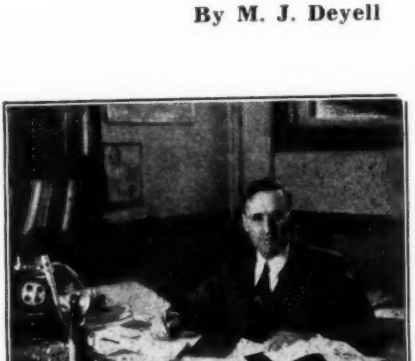
Didn't See a Beehive

Strange as it may seem, riding along on the San Francisco Streamliner, I didn't notice a beehive in California. The state has over 400,000 hives of bees. Apparently I did not look in the right places.

As we journeyed through Nevada, Utah, and southern Wyoming, much of those states appearing rather desolate, I wondered what bees would live on. Perhaps that was the reason I didn't see any bees.

. On the way home, I noticed some moderate sized apiaries in eastern Nebraska and Iowa. About 100 miles west of Chicago, I saw some hives five or six stories high, so surmised beekeepers there were experiencing a honey flow, possibly from alfalfa and heartsease. There was a considerable amount of what I call wild sunflower. It grows three or four feet high and has a yellow blossom about 2½ inches in diameter. Possibly some beekeeper in that district can tell me whether or not it yields nectar. This plant was noticed all through southern Nebraska and the eastern part of southern Wyoming.

I purposely avoided talking about bees and honey, unless, perchance,



Jack at his office desk

some people I met, learning my business, made some inquiry concerning bees. In most cases, the people I talked with seemed to be afraid of bees and claimed that bees would go out of their way to sting them. I assured them that such was not the case and that under normal conditions, if we let the bees alone, they will not trouble us.

It is unfortunate for the industry that a large percentage of people carry the idea that bees are vicious. The only advantage that I can think of in favor of the rather prevalent opinion is that apiaries will not be molested in order to steal honey, by people so inclined, because they have a profound respect for bees. When colonies of bees are molested or honey stolen, pilfering is usually done by those who have some knowledge of bee behavior.

Looking Ahead

It is quite necessary in beekeeping to plan one's work, not only for the entire season, but for a year ahead. The old saying, "Plan your work, then work your plan" certainly holds in successful beekeeping.

What a beekeeper does in the way of colony manipulation the latter part of this season has a great deal to do with success attained in securing the maximum crop of honey next season. This is especially true where colonies are wintered over. Of course, those who kill off their bees in the fall and start from

packages in the spring do not need to worry about winter losses. They need to do a little worrying about getting the bees at the proper time in the spring and getting them properly installed in order to build up colonies at the right time to secure the maximum crop.

Three Major Requirements in Wintering

For the benefit of thousands of beginners throughout the country who have never wintered bees, it seems essential to again emphasize the wintering requirements, even though they may have already been mentioned.

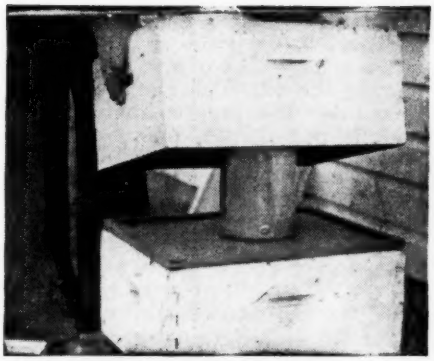
The three requirements are: **Ample food, populous colonies, and adequate protection against the elements.**

Food

Those who use the food chamber hive, a two-story hive for wintering, the upper story consisting of a standard or deep super, should, during a favorable season for honey, get the food chamber filled with honey in addition to what honey there is likely to be in the lower chamber. If there are 50 to 60 pounds or even more in both chambers, this amount should, under normal conditions, be enough to meet the requirements of a normal colony during the winter and early spring months up until the time abundant nectar is available.

Some may think that such a seemingly large amount of honey reserved for the bees is uncalled for. Well, there is this in favor of a superabundance of honey—the honey that is in the hive is never lost; it is good insurance against possible starvation during spells of cool weather in the spring and it encourages maximum brood rearing, provided, of course, an ample amount of pollen is available for brood rearing. If, perchance, the bees should not need all the honey that is left in the hive, the honey will be there, and the bees, after getting their food chamber refilled at the beginning of the honey season, can then start storing surplus honey in the supers earlier than they would if the food chambers were practically empty.

I wish all beekeepers, especially beginners, would re-read the two



Method of feeding sugar syrup using five or ten pound friction-top pail, the cover of the pail being perforated with about 20 holes made with a 3d nail. The pail of warm syrup is placed with its cover facing down over the hole in the inner cover, with the block removed. The empty super protects the feed can and the outer hive cover is placed on top.

foregoing paragraphs carefully. If you do this and carry out the idea I have tried to put across, you may save yourselves trouble and embarrassment and incidentally, secure much larger crops of honey.

Sugar Syrup Feeding

In the event that the season in some localities has not been favorable for bees to fill the food chambers it may be necessary to feed sugar syrup made from two parts granulated sugar mixed with one part hot water to make up the deficiency in natural stores. This illustration explains how this feeding may be done.

Don't Do as I Do but as I Say

In spite of what I have just said about winter stores, I will have to confess that it has been necessary, more than once, for me to feed my own bees in the spring. Had I left an abundance of stores with each colony such feedings would likely not have been necessary. However, the past two springs have been quite unusual in that protracted spells of cool rainy weather prevailed which kept bees from flying out to get nectar and pollen.

As a matter of fact, the wintering of bees does not seem to be the big problem, at least in this section of Ohio, but, rather it is the springing of bees. We have found from rather carefully conducted experiments during the years that normal colonies of bees in 2-story hives con-

sume between 20 and 30 pounds of honey between November 15 and April 15, which would be five months. During the past few winters we have had a hive on a scale. During the early part of the winter this hive lost approximately four pounds per month, about a pound each week or a little over two ounces a day. As spring approached, the amount of loss increased.

It is perfectly possible to winter a colony of bees in this latitude with less than 50 pounds of honey in the combs, but the trouble is that the average beekeeper overlooks the matter of checking on honey supplies in the spring and before he realizes what has happened some colonies have died of starvation.

Populous Colonies

A beekeeper told me within the past month that he did not agree with what I said in the September talk about the inadvisability of wintering weak colonies. As I recall, I said that we should not try to winter weak colonies. It is possible to winter colonies that are below par in strength. In order to do this we may have to reduce them down to the number of combs the clusters will occupy. However, if they do reach spring alive we have the problem of "babying" them through the spring months. In most cases such weak colonies have to be strengthened, either with queenless packages, or given combs of sealed brood with adhering bees from strong colonies. This means extra work and expense. If a backlot beekeeper has time and money to put into weak colonies in the spring, that is his affair.

I like to have colonies so populous late in the fall that each one will occupy at least seven or eight spaces between the combs when the bees have clustered tightly and are examined on a frosty morning. Such colonies, if given an abundance of food, plenty of sealed honey above each cluster, reasonable protection against the elements, and proper hive ventilation are likely to survive a very cold winter.

Protection

This seems to be a moot question these days—how much, if any, protection bees should have during the winter and early spring in the North.

Quite a number of successful beekeepers are wintering bees in this latitude and even a little further north, in single walled hives, with a windbreak from the prevailing winter winds. Some other beekeepers pack their bees rather heavily. In my opinion, some packing properly applied does no harm and perhaps some good. However, from some experiments we have conducted during the past decade, we have found that even though packed colonies consume slightly less stores during the winter, the unpacked

(Continued on page 636)

A natural windbreak for the North and West. This is one of the Root Co. out-apiaries.

Just News

The next meeting of the **Morris County Branch** of the New Jersey Beekeepers' Association is scheduled for 2:00 P.M., Saturday, October 4, 1947, at the apiary of Leslie Smalley, Main Street, Chester, New Jersey. — G. A. Downsbrough, Sec.-Treas.

* * * * *

The Florida State Beekeepers' Association will hold its annual meeting in Orlando, Florida. It will be two big days, October 13 and 14. A big get-together is being planned at one of the near-by lakes on the afternoon of October 13. Headquarters will be at the Angebilt Hotel.—C. R. Allgood, Sec.

* * * * *

The New Rochelle Beekeepers' Association, which has now officially changed its name to the **Westchester County Beekeepers' Association,** will hold its next regular monthly meeting at 2:30 P.M., on Sunday, October 19, 1947, at the Odd Fellows Hall, 20 Lockwood Avenue, New Rochelle, N. Y. After the business meeting, the main topic of discussion will be concerning the wintering of bees. Instructive movies will be shown and refreshments will be served. Visitors are always welcome. — B. F. Miller, Publicity.

* * * * *

The Meeting of the Southern Beekeeping States Federation is scheduled to be held at Buena Vista Hotel, Biloxi, Miss., on Nov. 27th and 28th. Plans are being made for an interesting and constructive program, and it is hoped that every shipper of package bees and queens will make plans to attend.—N. C. Jensen, Secretary.

* * * * *

The final field meeting for the 1947 season has been planned by the New Jersey Beekeepers' Association to be held at the apiary of Harry G. Lare, South Branch, Somerset County, N. J., on Saturday, October 18, 1947, commencing at one o'clock in the afternoon. A varied program has been planned, the outstanding part of which will be extracting honey and bottling. Follow the red arrows from a point on N. J. Route 29 about four miles west of Somerville circle.—E. G. Carr, Sec.-Treas.

* * * * *

The Alabama Beekeepers' Association will have its annual meeting at Jefferson Davis Hotel, Montgomery, Alabama, October 30, at 9:00 A.M. Important speakers on the program are Roy Pugh from Saskatchewan, Dr. Whitcomb of Baton Rouge, and Dr. Mackenson of Baton Rouge.—F. E. Guyton, Sec.-Treas.

* * * * *

Three big attractions are scheduled for the October meeting of the North Jersey Beekeepers' Association to be held in the Bergen County Courthouse on October 17, Room H, at 8 P. M. Mr. James I. Hambleton of the Beltsville Research Center will be the speaker. Mr. Carl Cordes, chairman of the organization's film library, has promised a showing of the film taken during the war. Election of the 1948 officers will also be held at this meeting, which is expected to top all attendance records. Mrs. Fred Conrad has announced that plans for the First Annual Honey Exhibition are well under way, and that the exhibition will be held during the latter part of October or the early part of November. There will be five classes of extracted honey, three classes of section honey, three classes for chunk honey, and three classes for wax. Other items may be entered but no awards will be made except for the above mentioned.

Don't miss the showing of these pictures which include every meeting we have held this year.—Richard A. Geoghegan, Sec.

* * * * *

A Controversial Subject—Weather conditions some winters are so variable that what will apply to one particular locality may not apply to another. Some winters are so mild that there is no difficulty in wintering bees provided they have plenty of food. Other winters in the same locality may play around the zero mark, upsetting all theories previously held. This will perhaps explain why there are slight differences of opinion on how to winter

(Continued on page 633)

Asked and Answered

The Use of Queen Excluders

Question.—I have been a subscriber to your magazine for some time, and I have noticed articles stating that there was a proper time to use excluders, and also there were certain times when same should be removed, but not at any time has it shown when that proper time was. I have been keeping bees for only about three years, and therefore have quite a lot to learn about them.—E. H. Beaman, Ky.

Answer.—It seems to be an advantage to use queen excluders in the production of extracted honey but they are not used in the production of section comb honey. You do not say which kind of honey you are producing. Here in Ohio, in our apiaries around Medina, we use a queen excluder over a double brood chamber, putting on supers above the excluder as they are needed. Sometimes, however, when honey comes in with a rush during the spring months, we add one or more supers without using a queen excluder, because bees will enter the supers a little quicker when no queen excluder is used. This adding of supers tends to relieve congestion in the brood chamber. When the honey flow has begun in earnest and danger of swarming is over for the season, we put on the queen excluder above the double brood chamber, making sure that the queen is below the excluder. In some regions where there is no fall honey flow of any consequence, beekeepers practice putting the queen into a single brood chamber during the honey flow, in order to make sure that the super, or food chamber above the excluder, is well filled with honey for winter stores. In regions where beekeepers can be reasonably sure of a good fall flow, it is customary to keep each queen in a double brood chamber during the summer and fall months.

Putting Hives Up—Away from Bear

Question.—Last October I lost six beehives by visits from a bear—quite a loss considering that the hives were full of bees and a good amount of honey. The barbed wire and the electric fence were useless. Besides bear there are coyotes, fox, cougars, and skunks in the district. To avoid further trouble I have in mind to erect a walkway on top of the barn roof with sufficient length to place six hives on it. The walkway would be about 18 feet above ground level. The question is: will the bees return to the hives in that height?—John F. Wiedemann, Wash.

Answer.—It would seem that the bees would return to their hives when placed on a walkway 18 feet above the ground, on the roof of your barn. Bees in one of their natural habitats, a hollow tree, will fly out and return through a small hole in the side of the tree when some distance from the ground. It is unfortunate that bear and other animals disturb your hives when placed on the ground.

Putting up Cut Comb Honey

Question.—How should cut comb honey be packed? Could it be put in glasses carefully to prevent bruising? Can combs be cut from the shallow unwired frames? Should one use a hot or cold thin knife? —Werner Juble, Maryland.

Answer. — Regarding cut comb honey put up in glass jars with extracted honey, there is usually a certain technique that is followed rather closely. For example, when such honey is put into a wide mouth 5-lb. jar, about three pieces of comb are put in—pieces that extend from the bottom to the top of the jar. Extracted honey is then poured in, in order to fill up the jar. This makes an attractive pack. In order to cut pieces of comb to put in the jar, an entire comb is cut out of a shallow frame which is laid on a flat board on a table. A hot knife is used to advantage in that it cuts quickly and easily. If you have much cutting of combs to do, it would pay to place the combs on a coarse mesh screen over a suitable container that would catch the drip of honey from the combs. Cut comb honey in glass brings a higher price than extracted honey. Just recently the writer saw honey in 5-lb. containers selling at $2.50 for a 5-lb. jar. Of course, the honey was sourwood, a delicious honey gathered in the mountainous region, and a honey that does not granulate. It would be impracticable to put up honey in this manner if it would granulate in a short time.

Rearing 100 Laying Queens

Question:—I expect to raise about 100 queens starting the first of August. I intend to use only 40 nuclei boxes and therefore would like to know what method I could use that would allow me to place 40 laying queens in reserve which

would then permit me to use the 40 nuclei boxes for another mating of queens from cells. Can laying queens be confined to nursery cages for a period of two or three weeks without impairing their laying qualities or reducing the possibility of safe introduction and acceptance? If confined to nursery cages should these contain attendant bees?—George M. Olowach, Michigan

Answer:—In rearing 100 queens using 40 queen mating nuclei boxes it would seem advisable to rear these queens in three lots, grafting about 35 or 40 cells each time. We assume you are using the grafting method which you doubtless understand. You could then introduce about 35 or 40 ripe cells to your nuclei boxes. You could put on another graft in order to have it come along in time to introduce 35 more cells to your boxes after the laying queens have been removed. You could then put a third graft and have the cells come along in order to introduce them when the second lot of queens are removed from the nuclei boxes. It is possible, however, to keep laying queens in cages for some time. In fact, we have kept them in cages for two months. It is necessary to have them in queenless colonies with fresh bees supplied periodically so that the queens will be fed by the bees continuously through the screens of cages. It is preferable to have no attendant bees in cages with queens.

Colonies from Packages Swarming First Season

Question.—Did you ever have a package of bees swarm the first year after being hived? I received a 4-lb. package on the 14th of May and put them in the hive that same evening. I fed them altogether about 23 lbs. of sugar thinking I would have good luck with them. But on the first day of July they swarmed. I lost them because I did not think they would swarm the first summer and I did not have another hive ready. I am only a beginner.—Mrs. Harry Ranger, Ontario.

Answer.—A colony of bees developed from a package is not likely to swarm the first season. However, during a good honey year swarming may occur. We found this out some years ago while producing comb honey. Someone told us that colonies developed from packages would not send out swarms the first season. Some colonies actually did swarm or prepared for swarming. We used efficient swarm control measures. If you produce extracted honey and have an ample amount of supers, it should be possible to control swarming by providing comb space which means putting on supers in plenty of time before they are actually needed.

Proper Opening for Hive Entrance

Question:—Why is the opening of a standard hive made 3/8 inch high, or is it? Old time beekeepers here make the opening around 3/4 inch high for full width of hive and claim that unless they have this wide opening there will not be width enough for bees to go and come and they will lose honey during a big honey flow. I have supposed that the sole reason for a wider opening during the hot weather of summer **only** was for ventilation and to reduce swarming and that room for bees to go into and come from the hive was not a consideration.—L. C. Craig, Illinois.

Answer: — The standard bottom board put out by manufacturers is reversible. It has a 3/8 inch entrance on one side and a 7/8 inch on the other. The 3/8 inch entrance will permit bees to leave and enter the hive freely. The majority of beekeepers use the large entrance during the summer months and reduce this entrance during the winter by using an entrance reducer. However, some beekeepers turn the bottom board over to provide the 3/8 inch entrance during the winter months. This seems to be the desirable procedure. The wider entrance during the summer months seems to be a swarm control measure especially when the weather gets hot. However, a few beekeepers use the 3/8 inch entrance during the summer and provide some ventilation above by staggering one or more supers.

Slumgum

Question.—What is meant by "slumgum"?—Paul H. James, Pa.

Answer.—Slumgum is refuse left in a wax extractor after old combs and cappings have been rendered into wax. Slumgum consists mainly of cocoons left in brood combs. These cocoons are left in the cells of brood combs which have been used in brood rearing. When bees emerge from cells, thin fibrous skins are left on the insides of the cells. Such cocoons in brood combs eventually constitute what is called slumgum after old combs have been rendered into wax. With the right kind of a melter or steam press it is possible to get some wax from slumgum but beekeepers who do not have the apparatus for securing wax from slumgum should not bother with it, but rather it should be sent to concerns that specialize in rendering wax.

Editorials

Honey Crop and Prices Because of copious rains in some parts of the North, in the clover belt, late summer honey plants, heartsease, alfalfa, and spring seedings of clover have given some nectar which is needed to increase the 1947 crop.

In some regions goldenrod is yielding well (at this writing on September 19). However, in the vicinity of Medina the late flow has not yet begun in earnest, but prospects for a fall crop are promising. Recent reports are that honey prices are holding firm, due in part perhaps to the fact that the honey crop generally will not be so large as anticipated earlier in the season.

Some few weeks ago honey appeared to be moving rather slowly. Of late the demand has strengthened.

New Favorite Honey Recipes This new book just off the press is a credit to the **American Honey Institute**, and especially to Harriett M. Grace, Director of the Institute, who has worked so hard and long on it.

Only superlatives can describe this new recipe book. The best recipes, the most attractive design, and the choicest colors have been chosen to make this an outstanding honey recipe book. Women will appreciate the plastic binding which allows the book to lie flat on the table wherever it is opened. This book is definitely destined to increase consumer interest in honey.

Requests for individual copies of the book will be filled at 25c. Members who wish to order in quantity may write the **American Honey Institute**, Commercial State Bank Building, Madison, Wisconsin.

Not Many Soybeans From a recent issue of "Farm and Dairy", published at Salem, Ohio, we find the following: "We are pleased to note this year that eastern Ohio counties in 1946 produced only a few thousand bushels of soybeans. The soybean grown for grain in our section is a soil washer and has little place in good farming. It ripens too late for mid-sowing of wheat, usually, and the soil is left so open and loose that it shifts with every rain".

We are sure that this trend away from growing so many soybeans will be good news for beekeepers. One reason for the short crop in the clover area during the past few seasons has been the large acreage of soybean, which is not a nectar plant. Furthermore, if the soybean is a hunger plant, and tends to increase erosion, it is not likely to be so popular in the near future as it was during the war years.

Sulfathiazole—Echoes from Recent Bee Conventions While reports concerning its use continue to be favorable, reports also indicate recurrence in a lighter form. This is apparently due to several mistakes in applying the drug: (1) Always ask for half gram tablets water soluble sulfathiazole. (2) Be careful to mix one of these tablets in a gallon of syrup, first dissolving the tablet in boiling water, then stirring the syrup thoroughly. (3) Remove all combs well covered with dead larvae. These rotten combs should be burned. (4) Before feeding the medicated syrup uncap all sealed honey so that the syrup can reach the spores under the honey. (5) A second treatment should be applied after the uncapped honey has been consumed. Even a third treatment may be necessary.

All of the foregoing must be completely carried out because one treatment alone is not enough usually to prevent recurrence. It cannot be emphasized too strongly that all colonies with rotten combs should be burned up completely.

Last of all, it is necessary to consult and get the consent of the bee inspector before applying treatment.

Alcohol Treatment

This, in brief, is one half of a level teaspoon of sulfathiazole water soluble in half pint of wood alcohol applied in the form of a spray from a spray gun on the combs from which bees have been shaken, and only on those combs when there is no sealed honey with a mild showing of diseased cells. Two and sometimes three sprayings of the

drug are recommended. The alcohol will evaporate almost immediately, leaving a fine film of the drug on the combs and brood. See article by R. E. Foster, State Bee Inspector of Florida, on page 620 of this issue.

While Gleanings entertains hopes that the future may show that the burning of bee hives and combs is a thing of the past, it will be safer for all of us to regard the new treatments as still in the experimental stage. As such, the bee inspector should watch proceedings, especially when one or more treatments have been applied.

A Method for Curing Robbing At certain seasons of the year bees are prone to rob, especially when hives are manipulated during a dearth of nectar.

Just recently a commercial beekeeper wrote us that his method of curing robbing in the yard, if it gets well started, is to remove the covers from all hives, leaving them open for a time. It seems that all colonies are on a par and that each colony is then interested in protecting its own honey.

The covers, after being left off for a short time, are then replaced and, according to this beekeeper, no further robbing is attempted.

We would be somewhat hesitant to try this out in a large apiary. We have, however, heard the method referred to a number of times during the years but have never given it a trial. Some beekeepers perhaps have tried it and others may wish to give it a trial. We should be glad to hear from those who have tried it out or from those who, after hearing about it, are willing to try it out.

We Never Know During the years we have had some interesting experiences along the line of getting or not getting crops of honey. In life, it seems that the things we think are going to happen may not and usually do not happen, and the things we do not expect to happen, do happen.

And so it is with honey crops. We may be all set for a big crop, with seemingly good prospects ahead, but for some reasons, not always easily understood, the crop does not materialize.

On the other hand, we may not be expecting a crop and the first thing we know bees are hauling in surplus honey. It seems that some good honey flows sort of creep up on us.

A few days ago (this is September 13) we went to western Ohio to escape the last of the clover honey crop. As we approached the apiary a distinct roar was heard, and bees at hive entrances appeared to be well filled with nectar. A rather unexpected honey flow was and had been on for a few days. Combs were bulging with freshly stored nectar. The honey we intended to take off could not be removed because it was too green. We had to put supers on some colonies. So far as we could determine the honey was coming from second growth alsike and heartsease.

Such an experience simply emphasizes the importance of having ample comb space — supers — on strong colonies right up until the close of the season. We never actually know — in this locality, at least—what the crop will be until the end of the season.

The moral seems to be: Have all colonies strong in bees and well supplied with supers throughout the season.

Large Buckwheat Acreage Creates a Problem This past spring, in areas where rains were practically continuous, preventing the sowing of regular farm crops, many farmers sewed buckwheat in June where they had intended to plant corn.

As is well known, a small sprinkling of buckwheat can spoil a crop of white honey if the bees work in the buckwheat before the white honey is removed. This problem presented itself this season and was made all the more difficult because the white honey flow, what there was of it, was later than usual. Some of the fields of buckwheat bloomed unusually early. In some instances, it was necessary to remove the white honey, even though it was not properly ripened or cured, in order to prevent its getting mixed with buckwheat.

As a result of this situation there may be more green honey harvested in the clover area than there has been for several years. Such honey, if put into cans and stored, is likely

to ferment. About the only thing that can be done with it is to heat it in 60-pound cans, using a hot water bath, stirring the honey, and bringing the temperature of the honey to at least 160°F. for half an hour, hoping to drive off some of the excess moisture. In other words, the beekeeper will have to try to do for the honey what the bees did not have a chance to do. This, of course, will mean more labor and expense, but, under the circumstances, it is about the only thing that can be done to save the honey.

Beekeepers in regions where no buckwheat is grown have something to be thankful for. On the other hand, if honey is scarce, buckwheat, even though it is dark, should be welcome. It makes excellent winter stores for bees. Some people prefer buckwheat to any other honey. Such people are usually brought up in localities where buckwheat is common. People not accustomed to the buckwheat flavor may not like it.

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More Bees Needed for Pollination Legume seed production in Utah can never reach maximum levels with existing numbers of honeybee and wild bee pollinators, stated Dr. G. F. Knowlton, Entomologist of the Utah State Agricultural College Extension Service, after discussing the alfalfa seed situation with F. E. Todd, of the U.S. D.A. and the Utah Agricultural Experiment Station, cooperative legume seed research center.

Evidence of this would be the fields of alfalfa in luxuriant bloom which have occurred following control of **Lygus** bugs, grasshoppers, and other injurious insects. Such fields were potentially able to produce tremendous seed yields. However, because of inadequate insect pollination, many such fields failed to yield seed sufficient to meet operation costs. Had an abundance of wild bees and honeybees been present to cross-pollinate these seed fields, several hundred pounds of additional seed often might have been produced, Dr. Knowlton emphasized.

Because of the urgency for greater seed production, Federal Entomologist Dr. G. E. Bohart, of the Logan Laboratory, is conducting research aimed at conservation and greater production of our more important wild bee pollinators.

Research aimed at improving management practices with honeybees to achieve maximum pollination service is being conducted by F. E. Todd and W. P. Nye, who also are Federal Entomologists. These scientists have found that in Utah at the present time the major proportion of alfalfa and other legume pollination is performed by honeybees. Because of such service rendered by honeybees and in order to secure adequate numbers for alfalfa seed pollination, it may prove to be profitable to subsidize beekeepers to attract more bees into alfalfa seed districts. Such payment to beekeepers to bring in more bees to secure adequate pollination is now common in most fruit districts throughout the country, Dr. Knowlton pointed out.

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"Save Clover Seedlings" The weekly bulletin of the Ohio Agricultural Experiment Station at Wooster, Ohio, for July 31, 1947, carries an article with the above title. The writer of the article states that after ten years of testing it has been shown that clover stands are damaged by leaving straw on them as it comes from the combine. It seems that the loss was not caused by the straw killing the clover by shading. To quote from the article: "The clover began to die in October and by this spring where the mass of organic matter—straw, weeds, and clover growth combined was heavy, the loss of clover was total. The amount of loss was, and has been in past years, more or less proportional to the amount of organic matter on the plot above a ton to the acre".

The article goes on to say that, if possible, the stubbles should be cut immediately after combining the wheat and that the straw stubble and all other material should be removed.

It would seem advisable that this information be passed on to farmers who may not be familiar with the latest approved methods. At least, anything that can be done to increase the acreage of good stands of clover will not only improve the soil but also will increase prospects for a honey crop.

From North, East, West, and South

SOUTHERN CALIFORNIA, Sept. 2

Weather: Today finds us plenty warm. Heat records reaching well up to all-time high over Southern California do not speak well for the beekeepers. Thunder showers as much as three inches in some of the mountain sections, helped to cool things off. These showers in some instances reached well into the valleys but were of no help to the beekeeper.

Market: Honey is in good demand at around 20c per pound. It is not being bought for speculation and the buyer does not seem to have any fixed ideas as to price any more than the beekeeper who is selling the honey. The time to sell is anybody's guess.

Miscellaneous: Bees that were moved to cotton fields and alfalfa north of Bakersfield are making some honey. This moving allows a beekeeper to take some 25 pounds per colony of buckwheat honey that otherwise would have to be left for winter stores. Some surplus besides winter stores is expected from the move. Butterflies were so numerous on the alfalfa in the Imperial Valley as to cut the flow from that source quite short.

Several fires since our last letter have burned over some thousands of acres. These fires burning as they do over our mountains and unirrigated parts of our Southland always destroy much honey producing flora. Some bloom will come after the first rain in the fall but the honey producing plants such as wild buckwheat, the black and white sages, take many years to get back into production after being burned over. Where there were no fires these honey-producing plants bloomed in the spring and early summer. They are dry and look lifeless now, but watch them when the first rains come. They will brighten up and show new growth getting ready for next spring blooming.

Keep colonies in good shape and Southern California will again have a good honey crop. We have had good crops in past years and will again.—L. L. Andrews, Corona, California.

NORTHERN CALIFORNIA, Sept. 4

Weather: About all that can be said of the weather for the past month is that summer temperatures prevailed. Some windy days with cool nights reduced both flight and nectar production but otherwise conditions were favorable for bee flight when the bees had anything to work on.

Honey Plants are holding up quite well considering the dryness of the soil. Star thistle has dried up largely in many places but is still yielding where the moisture accumulated in low areas during the fall and winter. Other weeds are yielding both nectar and pollen in favored locations but in the drier areas, colonies have decreased in weight during the past two weeks. The package bee producers are prone to leave their colonies heavy with honey for such colonies produce the greatest number of bees in early spring.

The poisoning problem is still acute in this section of the state with reports being received of many colonies killed or greatly weakened by the drift of arsenical dusts during the treatment of tomato fields. An increasing amount of these dusts are applied by air and the drift is as great as ever. Apiaries are not safe within three to five miles of fields treated if the drift of the poisons is toward the area in which the bees are working. Air currents follow rivers and streams and carry the dusts along such channels. Not all colonies suffer equal injury in every apiary, some being affected worse than others, indicating that all colonies do not work in the same general direction, or on the same source. Once a colony loses its

field force and gets a good supply of poisoned pollen stored in its combs, it soon loses its nurse bees, most of its brood, and dwindles to nothing within a period of two to three weeks. A three-story colony may be reduced to only a few frames of bees within ten days or between visits of the beekeeper.

Greater interest is being shown in the perfection of equipment to apply sprays by airplane, and when poisons are applied in spray form, no appreciable drift occurs and poisons adhere to the plants more effectively than the dusts. By next season, DDT, DDD, and other of the newer chemicals will be applied in place of arsenicals. They will be used in greatly reduced amounts per acre and the hazards of poisoning for bees, livestock, and other interests will be greatly lessened thereby. A combination of DDT and Chlordane has proved to be far more effective against cotton insects than the arsenicals, and much less hazardous to bees. Arsenic seems to be definitely on its way out as an insecticide and its passing will not be mourned by growers or by beekeepers and other agricultural interests that have been adversely affected by its use.

Honey Markets: The chief topic of discussion among beekeepers now is the trend of the honey market. It is probably fortunate that the honey crop will be below average this year, for the demand for honey is definitely below average. The chief stumbling block to the sale of honey remains in the amount of high priced honey left on the grocery shelves, much of which is also of poor quality. As long as even a few jars or 5-lb. tins remain, the grocer in not interested in buying more. However, one northern packer reports that his sales increased some 15% this past week, a hopeful sign of better sales ahead. Little honey is being sold by producers at this time.

Miscellaneous: The fire hazard in out-apiaries is still great and will continue so until after the first rains. It is good insurance to clear the ground in the apiary and for several yards around it as a firebreak. A portable spray tank holding five gallons of water is also an aid in reducing the fire hazard. (I needed one badly a couple of weeks ago.)

The use of sulfathiazole in the treatment of AFB involves so many conditions that most migratory beekeepers in northern California prefer to burn the occasional colony found diseased. As one beekeeper puts it, "When the infected combs are thoroughly burned, one knows the disease is destroyed but when a diseased colony is being treated over a period of three or four weeks, one never knows what may happen to spread the disease or if it is eliminated entirely after the brood is free of all symptoms".

The American Honey Institute should be proud of its new booklet on honey recipes and every beekeeper should secure several copies for distribution to their friends and prospective honey customers.—J. E. Eckert, Davis, California.

NORTH DAKOTA, September 8

Weather: Spring started in somewhat cool and backward but seemed to benefit the plants—particularly sweet clover. The delayed season apparently slowed down the activities of the sweet clover weevil, and as a result sweet clover has become more abundant along roadsides and in fields and waste places than for several years past.

A discouraging feature about sweet clover has been the common practice of farmers to plow their fields as the plants begin to come into bloom instead of allowing the fields to remain for hay, seed, or pasture. So common is the practice of early plowing that beekeepers usually inquire about the prospects before moving their bees to sweet clover fields.

Alfalfa has in some areas supplemented sweet clover satisfactorily as a honey plant and growers are showing increased interest in the role of the honeybee in pollinating their fields—thanks to the investigations done on this subject, and the educational program conducted by the National Federation of Beekeepers' Associations.

Condition of Bees: A problem of increasing importance is the lack of uniformity of colonies at the approach of the main honey flow. It appears to be a problem of more serious consequence with package colonies than with overwintered stock. It is all too common to observe from 10 to 25 percent or more of the colonies to deteriorate in even the well managed yards. Supersedure of queens and nosema are most frequently mentioned as the causes of colonies failing to be ready for the honey harvest. Whatever it is, beekeepers who are relying on package bees at prevailing prices must get a better understanding of the problem if they are to operate successfully.

Colonies to be overwintered appear to be well stocked with honey and young bees at this time. The beekeepers who Cyanogas their bees have already done so. With this procedure the colonies are made queenless at least three weeks before the Cyanogas is applied so that all brood will have emerged at extracting time. This also reflects an added benefit because the broodless colonies store pollen which is carried over in the combs for the package colonies used in restocking the hives the following spring.—J. A. Munro, Fargo, North Dakota.

TEXAS, August 30

Weather: The highest temperature of the summer in most areas of Texas occurred this month. However, the average temperature for August was below average and lower than in July. Tropical hurricanes moving inland from the Gulf of Mexico brought general rainfall to most of the State and ended a long drouth. Rainfall was rather variable, however, with floods in some areas, while only light rains fell in other areas and more rain is needed.

Bees and Plants: The rain brought many native plants into bloom. Brasil and whitebrush yielded some nectar and many ground flowers produced considerable pollen. Colonies, which a few weeks earlier were inactive and practically broodless, resumed brood rearing and are now in good condition for the fall flow from aster, broomweed, bitterweed, and many other plants. A most valuable fall blooming shrub is the evergreen sumac, **Rhus virens,** known locally as kinnikinik. This plant covers a large area from Central Texas southwest to the border. This shrub is now budding and promises a good fall flow. Some beekeepers move apiaries to kinnikinik in the fall, where in a season of good bloom colonies are assured of plenty of young bees and abundant winter stores.

Honey Crop: Except for a late crop from cotton, extracting has been completed. While the yield varies widely it appears that the crop for the state is normal.

Market: Movement of honey continues slow. Consumers are reluctant to buy at prices prevailing earlier this year. Most markets are offering one pound glass, good quality table honey at 35c. In spite of competition with other sweets, while sugar prices are expected to continue high, and the 1947 crop is not expected to be great, there is little reason why producers should not move their crop at considerably better than the war-time ceiling price, without resorting to price cutting.

Miscellaneous: According to "Today in Texas", Wilbarger County, with 90,000 acres of alfalfa, is perhaps the largest alfalfa growing area in the nation. It appears so far that few apiaries have been moved to that area, since only a small portion of the crop is devoted to seed production. A large portion of the crop is cured by dehydration for the production of alfalfa meal and the extraction of vitamines and other diatetic products.

The dates of the Texas State Fair at Dallas are October 4 to 19. The fair this year will probably attract the largest attendance in its history. Large exhibits of bees, honey, and other apiary products are planned and liberal premiums are offered. Fairs are ideal places for bringing honey to the attention of the public.

Beekeepers are also reminded of the meeting of the Texas Beekeepers' Association at College Station on November 3 and 4. A good program and a large attendance is assured.—A. H. Alex, San Antonio, Texas.

VERMONT, September 6

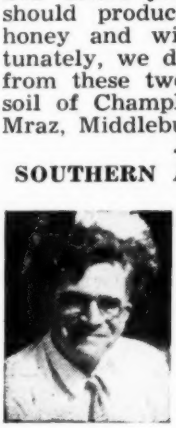
Weather: In the bee business there is, of course, nothing unusual about an unusual season, and the season just past is no exception. As was general over most of the country, we had a cold, wet spring, followed by a warm, wet July, and now ending up with a hot, dry summer. As far as the weather goes, it seems to have been about ideal, but ideal weather doesn't always mean a big crop.

Honey Crop: In addition to the good weather this season, another unusual feature has been an abundance of alsike clover. While last year it was difficult even to find a clover plant, this summer the meadows were just covered with the pink bloom of alsike. Under the ideal conditions of abundant rain and abundance of blossoms, we should have had a bumper crop, but now that the crop is in the cans, it has turned out to be just a good average. For some reason or other, the heavy, intense flow was only of a short duration and, had the honey continued coming in another week or so, it would have made a crop to talk about. Now that the weather has turned hot and dry, bees have gathered almost nothing for a month, and an abundance of grasshoppers are eating up considerable of the second crop of clover. In some places there is nothing but the stalks of alfalfa plants showing. Under these conditions, it is pretty hard to expect any such abundance of clover next year.

Honey Market: With the return of unlimited supplies of sugar, we expected that there would be quite a drop in the demand for honey, but, much to our surprise, the demand is quite active for our quality honey, selling between $1.75 and $2.00 a five-pound jar retail. The crop in Champlain Valley will, no doubt, be sold out by the end of this year.

Bees: The condition of colonies this fall is exceptionally good in strength and, while in Champlain Valley considerable feeding will be necessary for winter, we have seldom had bees in better shape. In spite of considerable swarming this past summer, there are very few queenless or drone-laying queens to contend with. In the mountain area of the state, goldenrod which is now in bloom is yielding some honey, and asters just starting to bloom should produce additional surplus honey and winter stores. Unfortunately, we do not get any honey from these two plants on the clay soil of Champlain Valley.—Charles Mraz, Middlebury, Vt.

SOUTHERN ALABAMA, Sept. 8



Weather: Our drouth and heat wave was broken this morning by a drizzling rain which appears to have set in for the day. Except for a few short spells we did not have much hot weather until August which was both hot and dry. This is quite in contrast with the weather in August last year, during which time we had continuous rains.

It does not take a long drouth to make it very dry here during the hot days of summer as our soil is light. Seemingly a dry spell during the latter part of the summer or early fall does much to ripen the wood of the current year's growth which in turn strengthens the buds for the coming season.

Condition of Bees: The condition of colonies that started the season strong is favorable. This has not been a good season for building up weak colonies or nuclei. The spring started moderately favorable for bees in spite of the cool weather but our main honey flow started 10 days late and lasted only one half its usual time. As a result hives for the most part are filled up with a mixed honey.

Miscellaneous: Most of the local honey is off at this time of year in this part of the state and one usually sees honey from farther north in the stores. Alabama does not supply its own needs with honey. This year the market is quite bare. There is very little honey at all and what little there is is being held at a very high price.

We are selling some poplar honey at this time which is the best we can do just now as our main flow was very light. Our prices are those which were once ceiling prices, partly because we haven't the grade of honey we usually have and partly because we are reluctant to go up on prices. We visited a store last week which sells local honey of what appears to be a very good grade. When asked, the proprietor said the price was $2.00 per 6-lb. glass jar.—H. G. Miller, Vinegar Alabama.

WYOMING, September 8

Weather: It seems traditional to talk about the weather. In beedom it is perhaps the greatest single factor of all in securing a crop. Extremes seem to have prevailed in most states. Wyoming has had as freakish weather as most any state. April showers lasted up until the first of July, with enough cool days so that feeding was required even through the entire month of June. Since then up to this writing high temperatures ranging up to 106 have been constant with a number of days of high hot winds. On July 20th, during the Sheridan Rodeo, a 66 M.P.H. wind was reached, blowing down one of the Carnival Company's rides, killing one person and injuring several more, climaxed by damage suits against the Carnival Co. for $100,000.

Honey Flow: The singular is most appropriate here and it lasted about two weeks before the country browned up. The bees have gotten a trickle several times since, but scarcely enough to make a living. Extracting is under way and the average will be about 25 lbs. Heavy overstocking of bees, alfalfa weevil, grasshoppers, and drastic reduction in alfalfa acreage owing to high grain prices go hand in hand with the weatherman in accounting for the per-colony production.

Condition of Bees: Swarming was at a minimum. Colonies at present are mostly too strong for the stores on hand. Prospects for filling up the brood chamber with winter stores are none too promising.

Market: Demand is still good, but much below 1946. Wholesale on 5-lb. pails is from $1.00 to $1.20 and when I think of the prices we got in the 30's, that's still good. No doubt honey sold a little too high under sugar rationing to make many friends for the industry.

Miscellaneous: Wyoming has thousands of colonies of out-of-state bees belonging to the big migratory operators. When it is realized that there are only a few small valleys in the state where beekeeping is possible in the irrigated districts, overstocking is felt keenly in a bad year like this. But if they can stand it surely the resident beekeepers ought to.

Thus far the alfalfa weevil is not regarded as likely to reach disastrous proportions but production of alfalfa hay and seed is less than half of what it was a few years ago. Considerable alfalfa had been cut early because of grasshopper infestation. We have also had a number of large grass fires the last few weeks which may affect plant conditions for next season. My report would not be complete without mentioning one bright spot, and that is the great help the feeding of sulfa appears to have been in reducing the number of cases of AFB. —Earl C. Reed, Ranchester, Wyo.

IOWA, September 7

Weather: There is nothing encouraging to report from this part of the state in the way of a good honey crop. Marshall County went without rain for over 30 days just when the white clover should have been at its best. On top of that we had an exceptionally hot month with the thermometer around the 100 mark and better. Clover dried up and the result is a very short crop.

Market: There is little honey on the market as yet. However, there is an abundance of heartsease in the corn fields which with favorable weather conditions from now on should give the bees plenty of stores for winter and yield some surplus. Beekeepers are selling their honey to merchants at 25c per pound, who are re-selling it at 50c. This shows what some merchants will do, as well as what harm they can do to the beekeepers in weaning consumers away from honey to

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other sweets not so high in price.

Most beekeepers I think fully expected to take a little less for the crop this year owing to the fact that sugar was plentiful and some of them priced their honey accordingly, but I am sure they did not expect the merchants to take advantage and make a huge profit at their expense. So far the retail price of honey in the stores is approximately what it was at its highest peak when the shortage of sugar was at its worst. They may have to come down. There is some California honey on the market they tell me, and I think it retails at 55c per lb. It is surely a long way from home.

Miscellaneous: One large beekeeper tells me the bees were not in the best of condition at any time and that he is quite sure the spraying of corn fields with DDT has something to do with it. While we know that bees gather no honey from corn, they can gather pollen, which, owing to the hot dry weather, was very scarce in other flowers, and there is a possibility this might cause some trouble with the bees. Of course this being a new insecticide there is much to be proved as to just how harmless this is to the bees. If it is harmful to bees from gathering pollen from vegetation being sprayed with it. this trouble might continue for some time as the pollen is scattered throughout the brood combs. We will all have to wait and see.—W. S. Pangburn, Marshalltown, Iowa.

UTAH, September 2

Weather: This year has had an abundance of moisture. Precipitation has been well above normal. The frequent rains during spring were beneficial to the plants. Rains during July and August brought much needed moisture, enabling the bees to gather nectar from otherwise dry honey sources. Some wind has prevented bees from gathering honey. Cool nights and mornings have shortened the working day, but a plentiful supply of honey has been gathered.

Crop Prospects: Prospects for a good crop seem to vary in various parts of the state. Various factors have cut into the crop in some sections. In other sections a bountiful supply is looked for. The general outlook is for a fair crop as the plant conditions have been excellent.

Price: The price of honey in Utah seems to vary. At the present time honey is not moving, which is causing a gradual decrease in prices. Prices have not reached a stable condition nor their lowest limit.—Blaine C. Taylor, Salt Lake City, Utah.

ONTARIO, September 8

Weather: During the past six weeks we in the vicinity of Toronto have had extremely warm weather with none too much rain. As a result, we have a fair crop of buckwheat honey, but not as much as in some former years when more moisture was present during the buckwheat flow. About 400 of our colonies have no buckwheat near them and in these apiaries very little honey has come in since the clover flow ended. It just happened that these latter apiaries gave us the bulk of our meagre clover honey crop while on the other hand the apiaries that gave us very little clover have the bulk of our buckwheat honey.

All told, we will average a good half of a normal crop—nothing to brag about but compared with the dismal failure of a year ago, we feel quite well satisfied.

Market: As to demand for honey and prices obtainable, really one wonders where the people get all the money they seem to have. We were literally bombarded by people who wanted honey and as to the price they would have paid, really I do not know the limit. We started to sell at prices recommended by the Crop Committee, and then later when the August issue of the C.B.J. arrived we found them recommending a price of five cents per pound more than that advised in circulars sent out earlier to the beekeepers. Not being a high price advocate, we are not kicking about the results but we do know that a number are disgruntled because of this misleading advice handed out earlier by our Crop Committee.

Just a word re the high prices

prevailing here in Toronto at present—as much as $1.60 for a four-pound pail is a common figure asked—we think that in the event of sugar being taken off the rationing list, these prices will not last long. The crop appears to be very light in so far as clover honey is concerned, throughout all Ontario west of Belleville, with a fair to good crop in the Eastern counties into Quebec.

Later reports point to much lighter crops in western Provinces than was thought possible a few weeks ago, so it does not appear possible that much honey will be imported into Ontario from western points.

Crop Conditions: Because of the wet summer in most of Old Ontario, clover growth has been exceptionally good and clover appears to be plentiful everywhere for the next year. A field of fall wheat near one of our apiaries was seeded this spring with alsike and it is nearly as high as the wheat and in full bloom. The farmer does not know how to harvest the wheat as he uses a combine and it will simply not work when half of the crop is green clover.

Miscellaneous: With another season practically over we are again led to wonder what has happened to the swarming problem in so far as our apiaries are concerned. For a number of years past we have had no trouble in controlling swarming and the amazing thing to me is that we have done nothing in particular to control it. No effort has been made to breed for non-swarming strains and yet the plain fact is that we have a number of apiaries that have not had a single colony offer to swarm that we know of. Of course, we do have a colony now and again that swarms out under supersedure, but not enough to cause it to be worth while for an overhaul of each colony every ten days or less.

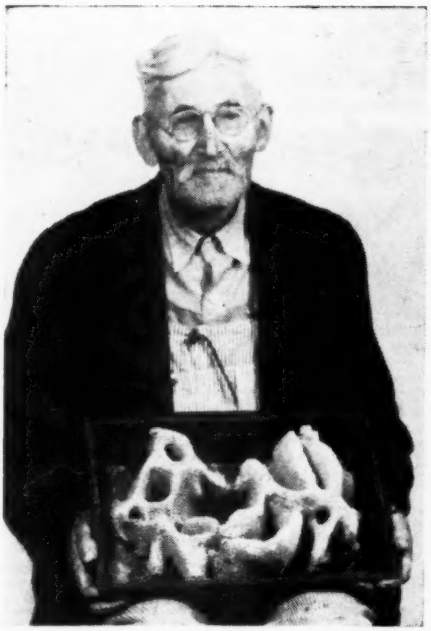
Another thing that we know nothing of in the way of practical experience is the matter of robbing. With about 30 apiaries we do not know of a single colony that was normal with a laying queen, that was robbed out during a number of years past. Again we have done nothing aside from our normal practice to avoid robbing, and I am often caused to wonder just why some have so much trouble.—J. L. Byer, Markham, Ontario.

Dr. G. F. Knowlton, research professor of entomology at the Utah Agricultural Experiment Station, has been investigating adult bee poisoning losses in Utah since 1939. This work is being conducted in cooperation with the U.S.D.A. apiculturists at the Bee Culture Field Laboratories at Logan, Utah, and Laramie, Wyoming.

XUM

Roy Howell and Son, of Saylorsville, Pa., visited our office recently. Mr. Howell has 500 colonies in eight yards, and sells his honey locally.

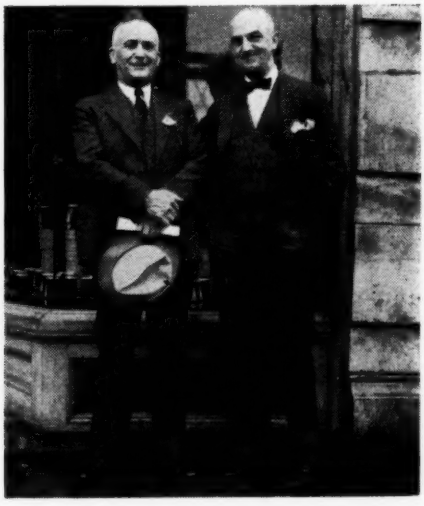
"My first visit to pop's apiary."—Nicole Bichard, Montreal.



Rev. D. E. Keech of Bethany, Mo., displaying an interesting formation of comb built by bees in the space above a super.

Bees and their honey—you can't see the bees but the "honey" is TWA hostess June Lyness listening to their buzz-buzz. The small package contains 25 individual compartments with one queen bee, three workers, and some special bee candy for food in each. They were put aboard a Trans World Airline Skymaster for Cairo, enroute to the Palestine Engineering Stores in Tel-Aviv, where they will be used for breeding purposes. The bees were shipped by Henry A. Jahn & Son, New York, for a Picayune, Miss., apiarist. —A TWA Airline Photo.

Celotex protection on lower brood chambers—being tested for winter protection of bees at North Dakota Experiment Station Apiary. J. A. Munro in picture.



M. S. Stone and A. G. Woodman. How they looked at the National Meeting held in Valdosta, Ga., in 1934.

XUM

More About Giving Sulfathiazole with Wood Alcohol

It will be recalled that some time ago the state of Florida adopted the sulfathiazole syrup feeding as the orthodox treatment for AFB. This matter was brought up at the Michigan Convention with the result that Mr. Kenneth Farner of Michigan explained how he had successfully used it, giving half a teaspoonful of sulfathiazole water soluble with half a pint of wood alcohol. This is thoroughly mixed and then put into an ordinary sprayer. The bees are shaken off the combs and the combs sprayed. The recommendations are to give two such treatments. The merit of the idea is that it spreads a thin film of sulfathiazole over bees and all brood sealed and unsealed, but to catch the sealed brood it will be necessary to give another application of the alcohol sulfathiazole.

We referred this matter to R. E. Foster, one of the oldest bee inspectors in the United States, and he replies as follows:

We are having such good success in feeding sulfathiazole in sugar syrup to diseased colonies here in Florida that I hesitate to change our method of treatment. We believe that it is easier to feed sulfathiazole in sugar syrup than it would be to spray the combs of brood with this drug in wood alcohol. If one spraying of the combs were sufficient to clean up the colony it would be different, but I notice from Mr. Farner's article that a slightly infected colony will probably have to be sprayed twice and a badly infected colony may have to be sprayed three or four times. It has been our experience that if a colony has a slight infection, one or two feedings will clean it up, and a very badly infected colony will clean up if given three or four feedings.

You mention the spraying method doing away with the danger of robbing. We have had no trouble whatsoever with robbing while feeding sulfathiazole and syrup. Our feeding is done inside the colony, placing the feeder over the frames, an empty super over that and the cover on top. It is a very simple matter to re-feed the colony, in fact, another feeding can be done with very little disturbance. It seems to me that the danger of robbing is greater in taking all of the frames of brood out of the hive to spray them.

We may try the alcohol and sulfathiazole spraying method later on, but at the present time we plan to continue with the use of sulfathiazole and sugar syrup. The only failures we have had were when beekeepers failed to follow the instructions of the inspector.

Don't forget that any and all treatment of sulfathiazole, either with syrup or with alcohol, are in the experimental stage. The bee inspector should be broad enough to allow the experimental work.

A dwarf variety of sweet clover being grown on the Experimental Farm at Brandon, Manitoba.—Photo by E. J. Britton.

Price of Honey

Interest has been great in the price of honey in the past few months. The following figures represent an expression of current prices from beekeepers and honey packers over the country. They are based on several reports from each state averaged with all of the reports in the region. Where insufficient information is returned, prices have been omitted from the chart. Where three figures appear on the chart the first represents the low, the middle figure the average, and the third figure the high.

Monthly Honey Report (Prices expressed in cents per pound)

	North East	South East	North Central	Mid West	North West	South West
Bulk Honey						
Table Grade	18-20		18-25	18-19½-25	17-20	14-16-24
Industrial Grade		14-18	15-21	15-17-20	14-16	13
Price to Grocers						
5 lb. jar or can	28-33	25-36	27-31	24-26-30	23-27	22-25-34
3 lb. jar	28-35	26-36	28-31			
2 lb. jar	28-35	27-37	27-32	28-31-37		27-28-31
1 lb. jar	38-40	30-37	28-33	28-32-40		26-31-36
Comb Honey (24's)	9.00-11.00		9.00-12.00	8.40		
Retail Price						
60 lb. can	24-30		23-26-30	20-25-31	21-25	20-25-31
5 lb. jar or can	32-40	33-40	25-36-45	25-31-35	26-35	25-35-45
3 lb. jar	32-47		33-36-45	34		
2 lb. jar	35-50		30-39-47	34-38-42		23-34-45
1 lb. jar	38-50	38-50	30-43½-55	37-44-57		25-38-50
Honey Sales	**Fair**	**Fair**	**Slow to Rapid**	**Slow**	**Slow**	**Slow**
Estimated Crop						
Conditions based on normal (%)	85		50	67	80	85

Importation of Adult Honey Bees Prohibited

A regulation which permitted the U. S. Department of Agriculture, acting on behalf of public institutions and commercial queen breeders, to import queen bees for experimental and scientific purposes is being revoked effective August 27 the Department announced today.

Rules and regulations originally written in 1923 are now inadequate, the Department declares, to prevent the introduction into the United States of a fatal bee malady known as Isle of Wight or acarine disease.

This revocation does not affect the importation of queen bees from Canada. Canada is free from the Isle of Wight disease and forbids the importation of bees from Continental Europe. Bees can be shipped either way across the Canadian border.

Revocation of the regulation and its accompanying rules will have the effect of prohibiting all other importations of adult honey bees except such as may be brought in by the U. S. Department of Agriculture for its own experimental or scientific purposes.

State entomologists, state bee inspectors, bee trade journals, and queen breeders for whom such importations were made just prior to the war have been consulted concerning this action. Practically all who have corresponded in reference to the proposed change of rules have urged that this action be taken. —U. S. Department of Agriculture, Agricultural Research Administration, Washington, August 26, 1947.

Do you know someone who likes honey but uses it only as an occasional spread for bread? Why not pass on a favorite recipe so that that person will know the satisfaction that comes from cooking with honey?

Do you know someone who likes honey but uses it sparingly because he considers it "just another sweet"? That person should be given information about the nutritional value of honey.

Use literature of the **American Honey Institute** to help you to show occasional honey-users how to use more honey for greater enjoyment.

Buy and Sell Here

CLASSIFIED ADS

Only responsible advertisers and honest advertisements will be admitted to these columns. References required from new advertisers not known to us. Rate:—12c per counted word, each insertion. Each initial, each word in names and addresses, the shortest word such as "a" and the longest word possible for the advertiser to use, as well as any number (regardless of how many figures in it), count as one word. Copy should be in by the 10th of the month preceding.

HONEY FOR SALE

AMBER HONEY CLOVER - BUCKWHEAT, mixed, 18c in 60's. F. J. Smith, Castalia, Ohio.

FOR SALE—Amber honey in 60's, 15c per pound in ton or more lots; Sample, 15c. Stevens Apiaries, Oberlin, Ohio.

FOR SALE—White clover honey in sixties. Carl F. Krueger, Fenton, Ia.

FOR SALE—Extracted and section comb honey. C. W. Schrader, Waterville, N. Y.

LIGHT AMBER and amber honey in 60-lb. tins. Sample 10c. Joseph Fekel, Vineland, N. J.

FOR SALE—100,000 lb. Eby's Wisconsin clover honey, $15.15 F.O.B. W. Elkton, in 60-lb. tins. Also available in 3 and 5-lb. glass. Beekeepers take notice—do not let your trade lapse—this is a fine flavor white honey—the kind of honey you will be proud to supply your customers. Alan Eby, West Elkton, Ohio.

WE BUY AND SELL all varieties of honey. Any quantity. Write us for best prices obtainable. The Hubbard Apiaries, Manufacturers of Bee Supplies, Onsted, Mich.

BEST GRADE HONEY FOR SALE—in large quantities, 25c lb. in your containers. E. R. Raley, Box 1610, Daytona Beach, Fla.

WHITE and amber honey for sale in 660-lb. drums, 60-lb. tins, and in glass jars. Alexander Co., 819 Reynolds, Toledo, Ohio.

100 BARRELS EBY'S TUPELO HONEY; packed in steel drums; from our apiaries in the heart of the white tupelo belt in Florida. Write us for our special pack for diabetic demand, for food and drug store trade. Hyland Apiaries, West Elkton, Ohio.

CLOVER OR BUCKWHEAT HONEY in new 60-lb. cans. W. C. Long, 1325 Andre St., Baltimore, Md.

FINEST QUALITY SOURWOOD honey, 60c per lb. in 5-lb. pails F.O.B. my place. Alamance Bee Company, Graham, N. C.

NEW WHITE CLOVER comb honey, $10 case of 24 sections. Guaranteed to arrive in good condition by freight. Clarence Engle, Kearneysville, W. Va.

HONEY AND WAX WANTED

BEEKEEPERS TAKE NOTICE—We can not guarantee honey buyers' financial responsibility, and advise all beekeepers to sell for cash only or on C. O. D. terms except where the buyer has thoroughly established his credit with the seller.

WANTED—Comb Honey, any quantity. Poland's, Jefferson, Ohio.

WANTED—Comb and extracted clover honey. State price in first letter. Honeymoon Products Co., 39 E. Henry St., River Rouge 18, Mich.

WANTED — White and amber honey, any amount. D. F. Treap, 316 Keenan Ave., Cuyahoga Falls, Ohio.

HONEY & BEESWAX — Highest prices paid. Mail samples. Advise quantity. BRYANT & SAWYER, LOS ANGELES, CALIFORNIA,

WANTED—EXTRACTED HONEY— Clover or Light Amber. C. H. Denny, 483 Moody St., Akron, Ohio.

CASH FOR YOUR HONEY—Extracted or comb. Regular trade, send sample. 60-lb. cans furnished, if desired. W. R. Moomaw, Stone Creek, Ohio.

HONEY WANTED—All grades and varieties. Highest cash prices paid. Mail samples. State quantity. HAMILTON & COMPANY, 1360 Produce St., Los Angeles, Calif.

HONEY in 60's, light clover preferred. J. Jones, 115 W. 82nd St., New York 24, N. Y.

HONEY WANTED—All grades. Carloads or less. Also beeswax. Pay top prices. H. & S. Honey & Wax Co., Inc., 265-267 Greenwich St., New York 7, New York.

ALL GRADES of white and amber honey wanted. Carloads or less. Mail sample and price. Alexander Company, 819 Reynolds Rd., Toledo, Ohio.

WANTED—Clover extracted and comb honey. Any quantity. State price in first letter. C. Jankowski, Prairie View, Ills.

HONEY—White clover chunk comb and section, any quantity. Quote prices. Lose Bros., 206 E. Jefferson St., Louisville, Ky.

WANTED—Clover extracted and comb honey. L. Konces, North Abington, Massachusetts.

WANTED — White or light extracted clover honey in sixties. Small quantities considered. Send sample and best price. Krema Products Company, Columbus 8, Ohio.

FOR SALE

QUEENBEE PAINTING OUTFIT, $1.00; colony records, 10-15c postpaid. Southwick Apiaries, Waban, Mass.

HONEY LABELS — Improved designs, embodying color, balance, simplicity, and distinction. Please send for free samples and prices. C. W. AEPPLER COMPANY, OCONOMOWOC, WIS.

WRITE FOR CATALOG — Quality Bee Supplies at factory prices. Prompt shipment. Satisfaction guaranteed. The Hubbard Apiaries, Manufacturers of Beekeepers' Supplies, Onsted, Mich.

We carry a complete stock of bee supplies and honey containers. Write for our price list. Prairie View Honey Company, 12303 12th St., Detroit 6, Mich.

SIMPLEX TRAP clips queens without handling. $1.75 postpaid. INSTANT FRAME spacers seven-eight-nine, fast—accurate. $1.50 postpaid. Free circulars. George Leys, 48 Drake Ave., New Rochelle, N. Y.

WRITE FOR LOW CASH price glass jars and 5-lb. tin pails. Complete stock. Prompt shipment. Roscoe F. Wixson, Dundee, N. Y.

FOR SALE—High quality medium brood foundation at 80c per pound. Fred Peterson, Alden, Iowa.

FOR SALE—Root 4-frame automatic reversible extractor, hand drive. Price, $50. Peter C. Tangen, Ossian, Iowa.

EXTRACTOR for sale, Root 2-frame reversible, with brake, in good condition. J. O. Stewart, Campbell Hall, N. Y.

FOR SALE—200 standard supers ready for use with wired foundation. Paul Zuech Breckenridge, Minn.

Pure Northern maple syrup in 5-gallon or 1-gallon containers at $4.85 a gallon. The Alexander Company, 819 Reynolds Rd., Toledo, Ohio.

FOR SALE — 2-lb. round honey jars, packed 12 to carton, with caps, 42c per carton, or $5.00 gross F.O.B. Summerfield, Fla., Route 1. J. W. Reitz & Bros.

WAX MOTH CONTROL

Protect your extracting combs with paradichlorobenzine. Non-poisonous—100% efficient. Send postal for circular and prices. TRITOX CHEMICAL COMPANY, WASHINGTON, INDIANA.

EXTRACTORS — One four-frame, reversible, power-driven, $75.00, and one eight-frame, reversible, power driven, $100. Ralph Nemec, Route 2, Eagle Lake Road, Willmar, Minn.

BEE EQUIPMENT complete to operate 40 colonies. List on request. No disease. Chas. Erickson, Fargo, North Dakota, R. 2.

FOR SALE—VOHO Entrance Closures! They save you valuable time, your bees, and your equipment. VOHO Entrance Closures securely screen an entrance in less than three seconds. VOHO Entrance Closures automatically lock into position when placed in the entrances. There are 12 distinct occasions when VOHO Entrance Closures will facilitate your beekeeping operations. VOHO Entrance Closures allow maximum ventilation with the least disturbance to the bees. Write for quantity prices and facts about these amazing new aids to beekeeping. Priced to sell—Upper, $0.80;—Lower, $1.30. Satisfaction guaranteed. VOHO PRODUCTS, R.F.D. 2, Ogdensburg, New York.

BEES AND QUEENS FOR SALE

We use all possible care in accepting advertisements, but we cannot be held responsible in case disease appears among bees sold. We suggest that prospective buyers ask for certificate of inspection as a matter of precaution.

HONEY WANTED

Carloads and less than carloads. Mail sample and best prices in all grades.

C. W. AEPPLER COMPANY

Oconomowoc, Wisconsin

HONEY WANTED

Mail your offerings and samples to us. Prompt cash on receipt of Honey.

Jewett & Sherman Company

Lisbon Rd. & Evins Ave.
Cleveland 4, Ohio
1204 W. 12th St., Kansas City 7, Mo.

HONEY WANTED

For Export and Domestic
All Grades - Any Quantity

Foreign Commodities Corp.

100 Hudson Street
New York 13, N. Y.

CARNIOLANS
CAUCASIANS

Both races very gentle, prolific, good winterers, wonderful workers. We can still supply some queens of these excellent races this month. Prices: Untested queens, $1.00 each; tested, $1.75 each. By Air Mail 4c extra per queen.

Albert G. Hann, Glen Gardner, N. J.

Honey Containers

1 lb. jars, carton of 24	$0.90
2 lb. jars, carton of 12	0.55
5 lb. jars, carton of 6	0.50

Clifford H. Denny

483 Moody St., Akron 5, Ohio

HONEY LABELS

Improved designs, embodying color, balance, simplicity, and distinction. Please send for free samples & prices.

C. W. AEPPLER COMPANY

Oconomowoc, Wisconsin

Protect Your Future
Buy U. S. Savings Bonds

Root QUALITY

BEE SUPPLIES

also

Michigan's most complete stock Honey Containers

for

Extracted Section and Cut Comb Honey

Paying Top Prices for Beeswax

M. J. BECK CO.

510 N. Cedar St. Box 7
Lansing 1, Mich.

STEEL DRUMS FOR HONEY

Ship your honey in Steel Drums (no leakage in transit) Drums free to our shippers. Write us.

The Fred W. Muth Co.
229 Walnut St.
Cincinnati 2, Ohio

EPHARDT HONEY FARMS
Plaucheville, Louisiana.

CARNIOLAN QUEENS
Booking orders for 1948

Protect your future.
Buy U. S. Savings Bonds now.

GOOD ITALIAN QUEENS, $1.00 each; ten for $9.00. D. W. HOWELL, Shellman, Georgia.

CAUCASIAN QUEENS to fill your hives with gentle high producing bees. Howard Crom, Ripon, Calif.

IMPROVED ITALIAN QUEENS—$1.00. From a strain that produced over 600 lbs. of honey per colony. Henry Loehr, Jr., Caldwell, Texas.

ITALIAN QUEENS—$1.10, any number. Satisfaction assured. Shipped by airmail for better service. Lange Apiaries, Llano, Texas.

BREWER'S LINE - BRED CAUCASIAN QUEENS — Queens for immediate shipment, any number, $1.25 each. We ship by Airmail. No package bees. PLEASE NOTE NEW ADDRESS. Brewer Bros. Apiaries, 3616 Caucasian Circle, Tampa 6, Florida.

REPLACE those old queens with young Italian queens this fall. Queens $.90 each by Airmail. Walter D. Leverette, Box 364, Fort Pierce, Florida.

SELECTED hardy Italian queens from heavy honey producing stock. Northern bred, northern raised. Each, $1.25. Baker's Apiaries, Glencoe, Illinois.

THREE-BANDED ITALIAN queens, untested, $1.10 each up to 25; over 25, $1.00 each. Alamance Bee Company, Graham, N. C.

GOLDEN ITALIAN QUEENS, untested, $1.25 each, any number. Carolina Bee Farm, Graham, N. C.

PACKAGE BEES AND QUEENS. Three band Italians. 26 years' experience. Circular free. Crenshaw County Apiaries, Rutledge, Ala.

CAUCASIAN QUEENS and package bees. Booking orders for 1948, subject to price Nov. 1. Lewis & Tillery Bee Co., R1, Box 280, Greenville, Ala.

BOOKING PACKAGE BEES with Caucasian Queen for spring delivery. Write Miller & Evans, Three Rivers, Texas, Route 1.

FOR SALE—245 colonies of bees including all the supplies and the honey. Price: $28 each colony with honey. Inspection certificate furnished. Steve Zupko, 4463-23 St., Wyandotte, Michigan.

FOR SALE—55 colonies of bees in two-story standard ten-frame hives with inspection slip; 175 full-depth supers of good combs, extractor, tank, uncapping table, excluders, bottom boards, escape boards, and many other supplies. J. E. Erisman, New Lebanon, Ohio, Phone 88-F-13.

FOR SALE—250 colonies Italian bees in ten-frame standard hives — except few eights. Heavy with honey and bees. Three shallow supers each. All painted. Metal covers. Some excluders, extra hives and supers. Combs drawn from foundation. Inspected when sold. Price reasonable. A. J. Deal, Normandy, Tenn.

FOR SALE—800 empty supers, 8-frame, good condition, 35c each. Also 200 deep Jumbo 10-frame hives of bees with one super around. $10 each, guaranteed no disease. Nealy Honey Co., Aberdeen, Ida.

50 or more colonies, Knight stock, 10-frame Root single-wall hives. Best offer before Nov. 1. Inspect for AFB. C. A. Sherred, Meadville, Pa., Route 7.

FOR SALE—150 colonies bees, 10-frame; 30-frame radial extractor; 400 supers, drawn combs; 100 new hive bodies, never used; 4-frame extractor. All equipment practically new and painted. Bees will be inspected before selling. Sal Martino, Vatalie, New York.

FOR SALE—40 hives of bees, part two-story, rest 1½-story. 5 queen mating hives, 3 nuclei hives. 100 supers, 2 two-frame extractors, other supplies including foundation. Will sell with honey that is on now. Best offer buys. These bees are state inspected. Edward Jolley, RD 5, York, Penna.

FOR SALE—300 single-story ten-frame colonies bees. Inspection slip for each yard. Plenty ten-frame equipment. Write for sale list if interested. Howard Sadler, Delphos, Ohio.

225 three-story eight-frame colonies. Supers made to form twin mating hives quickly. Inspected. Price reasonable. M. W. Harvey, Sebastopol, Calif.

FOR SALE—52 strong 2-story colonies with inner covers; over half with 3 and 4 supers honey. Unused 4-frame extractor. Extra equipment, newly painted. Inspection certificate furnished. Two locations near Toledo clover territory. Entire lot $2500 cash. Reason selling other urgent business. Box 3634, Gleanings, Medina, O.

REDUCING MY COUNT—Increasing my movability. For sale, good hives of bees with two shallows in Florida, $16 until December 1. No locations furnished. Lots of 100. WANTED—To arrange with those who kill their bees for package shipment to me this fall. Have bees inspected early. Read Florida regulations. Write to arrange terms and instructions. In Florida after September 1, Paul D. Thompson, 127 Ave A. N. E., Winter Haven, Fla.

GOOD QUEENS FOR FALL REQUEENING. Young, pure three-banded Italian stock that has made outstanding records for honey production in areas where large crops are made. You will like these queens and you probably can not buy better stock. They are reared to give you service. Through the years our queens have been doing just that. For good wintering and the maximum honey crop next year requeen every colony whose queen will be more than 18 months old by next July. Prompt shipment. $1.10 each; 25 to 99, $1.00 each; 100 or more, 90c each. H. C. Short, Fitzpatrick, Ala.

FOR SALE—110 colonies of Italian bees in standard dovetailed hives in A1 condition, with inspector's guarantee. Other supplies, namely: One Root 45-frame extractor, one 20-frame extractor, one Merry-Go-Round, one Brand capping melter, 300 lbs. Root's comb foundation, 7 sheets per lb., one good steam boiler, one 1500-lb. capacity Root honey tank, one honey pump. Good outfit for a beginner. L. S. Griggs, 711 Avon St., Flint 3, Mich.

BETWEEN nine hundred and one thousand colonies of bees in ten-frame standard hives with queen excluders. Nearly four thousand shallow supers with drawn combs. Complete extracting equipment. Guaranteed free from disease. Hives are full of bees and heavy with honey. Any reasonable offer will be considered for quick sale before they are packed for winter. Locations go with bees. Am selling account of health. J. F. Shipton, Lander, Wyo.

Be Thrifty, Be Wise

Keep in mind a shipper of PACKAGE BEES who can and will make deliveries in 1948.

That is our only business.

Our prospects are better at this date than in several years.

If you care to place an order now, we will book, subject to your approval of prices when established, without deposit. You have the right at all times to cancel and any deposit will be refunded. If we accept an order we guarantee to deliver.

We will use only new cages, supply health certificate with each shipment, and ship full weight packages with young queens.

Please do not ask us to take your used cages even as a gift. (See state regulations in bee journals.)

Rossman & Long
P. O. Box 133 Moultrie, Ga.

PACKAGE BEES AND QUEENS

Leather Colored Italians
Bred for Production

Prices of Package Bees and Queens:

Lots of:	2 lb.	3 lb.	Ex. Queen
1 to 24	$4.00	$5.00	$1.25
25 to 99	3.85	4.80	1.10
100 or more	3.75	4.70	1.10

Terms 25% deposit to book order, balance ten days before shipping date. We replace any bees that die in transit if it's our fault. If it is the carriers' fault, file claim with them. We start shipping February 1. Old customers will be given preference.

The Island Apiary

Collier City, Fla.

Announcement

Many of our customers are disapproving our idea of discontinuance of the package bee business. Therefore if you have previously ordered package bees from us send in your requirements for package bees to us and we will see what we can do for you.

We will be happy to hear from anyone who is in need of good Leather Colored Italian Queens.

O. K. Anderson & Son Apiaries
Coffee Springs Box 193 Ala.

10,000 3-pound Packages Eby's Bees for 1948

$5.00 each, any number. Place orders NOW for early delivery. 10% deposit with order.
Hyland Apiaries
Sylvester, Ga.

Bees and Queens

Italians - Caucasians and Daughters of Queens
Bred for Resistance
Over 30 Years a Shipper
Send for FREE Circulars
BLUE BONNET APIARIES
Weslaco, R 2, Box 23, Texas

ITALIAN QUEENS

Hardy, vigorous, prolific.
$1.00 each.
B. J. Bordelon Apiaries
Moreauville, La.

Now booking orders for 1948 Leather Colored Ialian Queens and Package Bees

Write for Price
LYNN WILLIAMS
Rt. 3 Oroville, Calif.

Modern Beekeeping

The picture magazine of beekeeping. We show you with pictures how to do the job easier, quicker, and better. Special inventor's page. One year, $1.00. Free sample copy.
Modern Beekeeping
Paducah, Kentucky

FOR SALE—Complete 100-colony double 10-frame extracted outfit. Good condition, going concern. Will give disease history. Clean now. Fred Boerner, Mount Carroll, Illinois.

FOR SALE—422 average three or more story colonies Italian bees with all equipment consisting of 400 colonies in ten-frame hives with nine frames to hives and supers and 22 colonies in eight-frame hives, truck, extracting equipment, vacuum bottling equipment, probable 5 to 10 tons surplus amber honey still in colonies, and miscellaneous equipment. Price for all, $8000 with possible terms to responsible real estate owner. Bees will be inspected if buyer wishes. Will sell all or any part. Back injury is reason for selling. Vernon G. Stevens, 278 East College St., Oberlin, Ohio.

SEEDS

CHINESE VITEX, nice blooming size, 20c each, postage paid after first dozen. Seed, 50c an ounce with instructions how to grow. M. F. Bond, 1601-E-6, Joplin, Mo.

NECTAR AND POLLEN YIELDING TREES ,SHRUBS, and PLANTS for your section. Write for our illustrated descriptive Folder now and plant this fall. NICOLLET COUNTY NURSERY, St. Peter, Minn.

ANISE HYSSOP, wonder honey plant, blooms from June until frost. New crop seed, per ounce (20,000 seeds) $2.00, postpaid. Send for our circular describing 40 good honey plants. Pellett Gardens, Atlantic, Iowa.

SUPPLIES

Here's what you have been waiting for. THE NO. 10 ELECTRIC UNCAPPING KNIFE. The best knife on the market. Uses either A.C. or D.C. 110-volt current. Blade 10 in. long, 2⅛ in. wide, ⅛ in. thick. High carbon knife steel. High and low heat. Faster than most steam knives. Order two, have a spare. Satisfaction guaranteed. Price, $12.00 f.o.b. Minneapolis. HONEY SALES COMPANY, 1806-08 North Washington Ave., Minneapolis 11, Minn.

HELP WANTED

EXPERIENCED MAN, married or single, year round work. Must be honest and industrious, no tobacco user or drinker. State age, height, weight. Prefer to pay wage and percentage of crop. References exchanged. T. J. Rowe, Arlee, Montana.

WANTED — Experienced queen yard man. Year around employment in yards and shop. We can furnish a good modern home to live in. Give full information, age, experience, and salary expected in first letter. H. C. Short, Fitzpatrick, Ala.

WANTED — Experienced queen and package bee men for our apiaries. Only honest reliable men considered, no boozers. Give full information, age, experience, reference, and salary expected in first letter. Good opportunity for right parties. YORK BEE COMPANY, JESUP, GEORGIA.

WANTED TO BUY

WANTED TO BUY—25 to 50 colonies of bees with minimum of 50 lbs. honey for wintering. Inspected. Extracting supers if possible. Within hauling distance. W. E. Warren, Torrington, Wyo.

WANTED — Book "Honey Plants of North America", Lois D. Jewett, East Arlington, Vermont.

MAGAZINES

INTERESTING, NEW, DIFFERENT, PROFITABLE magazine. For the person with only a city lot or several acres. Write: BACKYARD FARMER, 224 Bellis Street, Duluth 3, Minnesota.

THE BEE WORLD—The leading journal in Great Britain and the only international bee review in existence. Specializes in the world's news in both science and practice of apiculture. Specimen copy post free. 12 cents stamps. Membership in the Club including a subscription to the paper, 10/6. The Apis Club, L. Illingsworth, The Way's End, Foxton, Royston, Herts, England.

THE INDIAN BEE JOURNAL—The only bee journal in India. Sample copy against 25 cents (or 1s 6d.) postage stamp, Yearly, 7s, 6d, ($1.50) International Money Order. Apply Bhupen Apiaries, (Himalayas) Ramgarrh, Dist Naini Tal. U. P. India.

WESTERN CANADA BEEKEEPER—official organ of the Manitoba Beekeepers' Association. One year, $1,00; in combination with one year's subscription to Gleanings in Bee Culture, $2.25. Wallingford Building, Winnipeg, Canada.

Read the South African Bee Journal to be conversant with conditions from far afield. Subscription 5/ per year. For further particulars, write to the Hon. Treasurer, E. E. A. Leach, Box 57, East Rand P. O., Transvaal, South Africa.

INTERESTED in Angora Goats? Read the Sheep and Goat Raiser, Hotel Cactus, San Angelo, Texas, the only ranch magazine published serving the Angora Goat industry. Subscription—$1.50. Sample copy—fifteen cents.

Australian Beekeeping News
The Leading Bee Journal of the Southern Hemisphere is the
"AUSTRALASIAN BEEKEEPER"

Subscription 8 shilling per year. Start any time. Inquire for International Money Order for 8 shillings (Australian) at your Post Office.

Write now to the Editor,
P. O. Box 20, West Maitland,
New South Wales, Austria.

Queens of the Golden West
Buy Western-bred queens and package bees for best results. We are now booking orders for spring 1948.
CLIFTON APIARIES
Oroville, Box 684, California

Northern Queens
A hardy improved strain of Italians
PRICES JUNE 1 TO NOVEMBER 1:
Untested, $1.35 Tested, $2.25
Air mail Postpaid
Prompt Service Satisfaction
Barger Apiaries Carey, Ohio

Requeening and Increasing
Use young laying queens
Italian 3-Banded Leather Colored Bees
Prices till October 31:
$1.00 Untested, each $1.00
$1.50 Tested, each $1.50
Postpaid, Air Mail, with health certificate and directions. Prompt service. We satisfy.
Gooch Apiaries
Farmersville, Texas

Canada's
National Monthly Magazine
for Beekeepers
Canadian Bee Journal
54 Bloor St., W., Toronto 5, Ont.
U. S. Subscription Price,
only $1.25 per year

THE BEEKEEPERS' MAGAZINE
"A Little Independent"
Send for your free copy today
(Regular rate, $2.00 per year)
THE BEEKEEPERS' MAGAZINE
3110 Piper Road Lansing 15, Mich.

ITALIAN QUEENS **PACKAGE BEES**
Plan Now for 1948

Over-weight packages good young bees headed by queens bred from carefully selected stock with a high record of production.

Efficient Service — Prompt Delivery
Live Arrival Guaranteed

Limited number of desirable shipping dates open at this time.

GEO. A. HUMMER & SONS
Established 1892
Prairie Point, Miss.
Telegraph—Western Union
Macon, Miss.
Telephone—Macon
370J4 — 370W1

SURPLUS ROYAL FOOD

(Continued from page 584)

quite wrong in his footnote to Mr. Latham's article when he says "egg laying odor or a prosperous colony odor makes introduction easy and successful", for this queen had positively no "egg laying odor" or "prosperous colony odor" at the times of acceptance. She also showed us that it is not directly reduction in egg laying which makes bees supersede their queen, but reduction in her ability to take all the surplus royal jelly they have to offer her.

A queen sent through the mails has received practically no royal jelly for some days, and is so reduced that she cannot accept all the royal jelly offered by a big force of bees until she has been fed royal jelly through the screen for some time before release. It is a change in her internal condition and not reduction of a "mail bag odor" which renders the queen acceptable.

Waban, Mass.

Protect your future.
Buy U. S. Savings Bonds now.

MORE FALL REQUEENING BEING DONE

BECAUSE—1. No spring break in egg laying. 2. Less supersedure and less swarming. 3. Queens not used up with a season's heavy work. 4. Installed and ready to forge ahead in spring. 5. No costly delays as queens are more plentiful. 6. Conditions are best for rearing of good queens. 7. Northern bred stock, while preferred by many, is hard to get in early spring.

Hollopeter's young mated and laying queens, $1.00 each. Shipped promptly on date wanted.

WHITE PINE BEE FARMS
Rocton, Pa.

TOO LATE TO CLASSIFY

FOR SALE—Complete set of Gleanings from January, 1896. to and including 1946. Percy Orton, Broadalbin, R. D., New York.

WANTED—Large or small lots comb, cut comb, chunk, and extracted honey. Our trucks will pick up at honey house. Wire collect or write us what you have. Let our representative call on you. References: Manufacturers and Mechanics Bank or Merchants Bank of Kansas City., Mo. We also offer carlots or less bottled honey. All sizes for sale. Frank King and Son, 326 South Bales Ave., Kansas City, Mo.

HONEY WANTED — Extracted clover preferred in 60's. Cash deal. Interested in small lots. Mail sample, price, quantity. A. C. HONEY CO., 5005 Woodland Ave., Western Springs, Ill.

QUEENS QUEENS

October is the last month for Tanquary's Queens. Our queen yards will be closed on November 1st. Try our Queens.

We are now booking orders for 1948 delivery. Let us book your order for bees and queens now, for spring delivery. Our prices will be out December 1st. Booking orders without deposit until that date. Bee Wise! Order early.

Price List for remaining 1947 season:

	1-5	6-49	50-99	100-up
2 lb. pkgs. bees with queens	$4.25	$4.10	$3.95	$3.75
3 lb. pkgs. bees with queens	5.25	5.10	4.95	4.75
4 lb. pkgs. bees with queens	6.25	6.10	5.95	5.75
5 lb. pkgs. bees with queens	7.20	7.00	6.85	6.75
Queens	1.30	1.25	1.10	1.00
Tested Queens	2.15	2.00	1.95	1.80

Queenless packages, deduct $1.15 per package
Queens Postpaid — Package bees F. O. B.

Tanquary Honey Farms, Inc.

Lena, South Carolina

1948

Babcock's Production Bred Italian Bees & Queens

Now booking orders for April and May shipment.

We offer several thousand four frame nuclei, each containing four combs filled with brood, pollen, and honey; a young laying Italian queen, and two lbs. of young worker bees.

We have shipped these nuclei into every part of the country and our customers report they build up quicker, store more honey, and require less attention than any other package.

These nuclei are sold only in lots of two or multiples of two, and are shipped two nuclei in a single ten frame hive body, partitioned in the middle and screened top and bottom.

One third down books order and choice of shipping dates, balance due ten days before shipment. Orders may be cancelled any time before shipping date, with refund in full. Certificate of inspection and live delivery guaranteed.

Price: two, four six, or ten nuclei	**$7.50 each**
over ten nuclei	**7.20 each**

Wooden Goods

METAL COVERS, telescoping on all four sides, complete with nails and pure aluminum covering, 5 for	**$5.95**
BOTTOM BOARDS, standard reversible type, made from 100 per cent pure cypress, 5 for	**4.50**
HIVE BODIES, empty, complete with frame rests and hand holds on four sides, 5 for	**5.75**
STANDARD TEN FRAME HIVES, complete with telescoping metal covers, hive bodies, bottom boards, and divided bottom bar frames. No inner covers Five for	**21.00**

All equipment is furnished in ten frame size and is completely dovetailed.

BABCOCK HONEY COMPANY

803 Sumter Street Columbia, S. C.

PACKAGE BEES
FOR 1948

We are now booking orders for early spring shipments. Get your order filed for preferred dates. Send $1.00 to book and hold shipping date. Balance when prices are announced. All deposits subject to refund if cancelled or if prices are not in line. ORDER TODAY.

The Puett Company, Hahira, Ga.

Queens, one of the world's leading strains of Light Colored Italians, airmail postpaid, fresh from our breeding yards. All queens have one wing clipped half way for your convenience in handling.

30% discount on queen bees for the Balance of the Season—Off prices below:

Lot:	
1-5	$1.55
5-15	1.50
15-25	1.40
25-up	1.35

Small orders, cash in full. Large orders, 20% deposit, balance to be received two weeks before shipping rate.

For a decade we have served the beekeepers of a Continent. Our wish is to continue to enjoy your good will.

The Daniels Apiaries, Picayune, Miss.

GARON'S QUEENS

Three-Banded Italians

MRAZ'S STRAIN Bred for Resistance to A.F.B. Health Certificates on all shipments.

We will operate sufficient nuclei to fill your orders as late as the end of November. However, the earlier you place your order the better.

Prices: 1 to 25 at $1.00; 26 to 99 at 95c; 100 and up, 90c

Queens clipped and Airmailed at no extra cost.

Garon Bee Company ..... Donaldsonville, La.

BEES FOR 1948

It is still too early to definitely quote prices for 1948. It is not too early to make tentative plans. We are booking orders for 1948 subject to further confirmation when prices are published.

Girardeau Apiaries, Tifton, Georgia

Italian Package Bees and Queens

LIVE AND LEARN

(Continued from page 591)

leaves that I was using for insulation. The following summer that hive gave me the biggest crop that I ever got, and for that matter the surplus honey record from that colony is still the highest I ever made.

The old proverb about one swallow not making a summer may be true, but I reasoned that, by golly, if that was an accident I would try it again. I did it again the next year, and although I didn't break any individual records, the yard records were the highest ever, so that was the end of heavy packing for me.

Boiling everything down to fundamentals, and don't hang me if it doesn't work for you, I pack my colonies with plenty of honey. I fix things so that those howling winter winds can't reach the hives, I give them an upper entrance hole and a small "one bee" entrance on the bottom board. I take off the outer cover, take off the closing block (as a matter of fact I leave it off all the year around because it keeps out ants) then lay a couple of old burlap bags folded so they fit the inner cover without hanging over the sides, then put the outer cover on top of it all and tie it on so that it can't blow off.

That's all. I can't boast of 100% success, but I can say that if the bees are in good condition in the fall, they'll come through for me in the spring.

JENSEN'S

"Magnolia State" Strain Italians and Daughters of Tested Resistant Breeders Mated to Drones of Tested Resistant Mothers

Good queens are a primary prerequisite to good wintering. Young queens, other things being equal, will start egg laying earlier in the spring than old ones, consequently earlier build-up is assured.

Because of continuously increasing demand for our queens, we operate our queen yards on a full-time basis, maintaining quality not attainable on a part-time "hit or miss" schedule. We expect to have sufficient queens to supply all orders through October.

"Magnolia State" Queens
1-24, $1.20 each; 25-99, $1.10 each; 100 up, $1.00 each.

Daughters of D.R. Stock, Isolation Bred
1-9, $1.45; 10-49, $1.35; 50-99, $1.25; and 100 up, $1.20 each.

Jensen's Apiaries
Macon, Miss.
The business QUALITY built

We are booking orders for Italian Package Bees and Queens for 1948 Delivery
Write for Prices and Details
A. M. Peach
Baldwyn, Miss.

QUEENS ..... BESSONET'S ..... QUEENS
October is the last month to requeen. The kind of stock you use will influence your honey crop. Try ours.
Prices: 1-24, $1.10 25-99, $1.00 100-up, 90c
1948 package bee and queen schedule is now heavy.
Bessonet Bee Company, Donaldsonville, La.

BETTER BRED QUEENS THREE BAND ITALIANS
We thank our many customers for their patronage this season.
We are now booking orders for 1948.
CALVERT APIARIES — Calvert, Alabama

—GOT A HOBBY?—

Keep up with the latest developments in your field. Here's a group of magazines that specialize in a particular subject! You'll be interested in at least one of these magazines...and you have the assurance that the articles are written by people who know. Send in your subscription today!

HORSES — Per Year
Spokesman and Harness World, m., (for harnessmakers, 3 yrs., $2) $1
The Horse, bi-monthly, breeding, schooling, training, horse sports, $5.
Rider and Driver, m., horse-sport-pleasure, $5.

DAIRYING
Dairy Farmers' Digest, m., $1.

FRUIT
Better Fruit, m., $1.
Eastern Fruit Grower, m., $1.

BEE MAGAZINES
Gleanings in Bee Culture, $1.50 per year.
American Bee Journal, $1.50.

LIVESTOCK
Arizona Stockman, m., $1.
Pacific Stockman, m., $1.
The Polled Hereford, m., $2.
The Sheepman, $1.
Florida Cattleman, $1.
American Cattle Producer, $1.
Coastal Cattlemen, m., $1.

FARMING
Farmers' Digest, m., $2.50.
The Country Book, quarterly, $2.

PIGEONS
American Pigeon Journal, squab—fancy, $2.

POULTRY
Cackle and Crow, the Poultry Paper, $1.
Poultry Billboard, m., $1.

RABBITS
American Angora Rabbit, m., $1.
Angora Rabbit News, m., $1.
The Rabbit Raiser, m., $1.
Small Stock (rabbits, cavies), $1.
American Rabbit Journal, m., $1.
Calif. Rabbit Mag., m., $1.
Calif. Rabbit News, m., $1.

OTHER SPECIALTIES
Modern Game Breeding, m., pheasants, wild waterfoul, etc., $3.
Game Breeder and Sportsman, m., $2.50
Canary World, m., $1.50.
Black Fox Mag., m., fox, mink, $2.
Tailwagger, m., (Dogs) $4.50.

All magazines are monthlies unless otherwise noted; prices are for one full year. Satisfaction guaranteed. All orders are handled promptly and acknowledged. Rush your subscription today. Remit in any way convenient to you.

SEND FOR FREE CATALOG

MAGAZINE MART

Dept G B — Plant City, Florida

Protect your future.
Buy U. S. Savings Bonds now.

MOVING HONEY PLANTS INSTEAD OF BEES

(Continued on page 589)

In January, 1878, A. I. Root pronounced the honey equal to that of clover, both in looks and taste.

Even in Illinois where I lived we had a fine white clover country but some seasons were so dry that the clover was of short duration. In other years we had fine blossoming periods but it would be so rainy it failed to yield well. The Simpson honey plant yields, as I have said, even during a wet and rainy time.

Vitex and Golden Honey Plant

These gave me a fair surplus even during the drouth when everything else had dried up. The Golden honey plant resists drouth better than all of them. Even year-old plants stood the dry weather on high rocky sand and came through nearly 100% alive. I am not planting any more of the Golden plant here, as I already have it along a small river where it takes care of itself. For 30 to 40 days bees come in just loaded.

Now, many are becoming interested in Vitex and it really is a wonder. I've always loved to experiment in budding and grafting, also in growing from cuttings. Sometimes I fail, but I have over 400 Vitex cuttings now growing fine. When the work is done right it is easy.

There are at least three kinds of Vitex—one with variegated leaves. One kind is much hardier than the other two kinds. I am working only with the most hardy variety. This stands more hard freezing and gives longer blossoming periods.

I planted a whole quart of fine basswood seeds last year. Not one grew although I had soaked the seed in water. I tried a few basswood plants from cuttings this spring and so far they are all growing.

I sure have been busy answering over 350 letters. I love to answer them but it takes lots of time, and, as I am over 80 years of age, it is not easy. Many forget to enclose stamps and often it is very hard for me to figure out the address. Enclosure of a stamped self-addressed envelope would be of great help.

Verona, Mo.

Above photo shows part of our queen yards containing over 10,000 nuclei

Italian Bees with Young Queens

PRICES:

	1 to 9	10 to 49	50 to 99	100 and up
2 lb. pkg. with queen (each)	$4.50	$4.25	$4.15	$4.00
3 lb. pkg. with queen (each)	5.65	5.40	5.30	5.15
4 lb. pkg. with queen (each)	6.80	6.55	6.45	6.30

Queens (each) $1.35 Tested $2.00

Overbey Apiaries, Bunkie, La.

JUST NEWS

(Continued rom page 605)

bees as shown in the article by Charles Mraz and the one by myself.—E. R. Root.

* * * * *

American Honey Plants, revised and enlarged, by Frank C. Pellett, is now available. It is published by Orange Judd Co., New York, and sells for $6.00. The matter is alphabetically arranged, comprising 460 pages, well illustrated, and neatly bound. As an authoritative reference book on honey plants it is unsurpassed.

* * * * *

The second edition of "The Beginner Beekeeper in Louisiana" by E. Oertel, Associate Apiculturist, Bureau of Entomology and Plant Quarantine, U.S.D.A., Baton Rouge, La., is now ready for distribution. This 52-page bulletin, well written and illustrated, is especially adapted to the beginner beekeeper and certainly fills a need.

* * * * *

An Anchor Hocking Glass Corporation contribution to the program of the **American Honey Institute,** is a commercial announcement on honey, to be delivered over 145 stations of the Columbia Broadcasting System on "Crime Photographer" program, Thursday, October 30, at 9:30 P.M. Eastern Standard Time. Beekeepers should be listening at that time.

Increase of Bees in U.S.A.—According to the honey report as of July, 1947, put out by the Bureau of Agriculture and Economics, our country now has a total of 5,910,000 colonies of bees. However, this is only 2% more bees than were on hand this same date in 1946. We have 36% more bees than we had on July 1, 1940. This gain in seven years is quite commendable. Our country needs still more bees.

Screw-on Honey Gate for 60-lb. Cans

No drip. Fine for filling jars or pails. Nickel plated. If you are using cans purchased more than a year ago, send a cover. New cans have standard 2½" caps.

$2.00 Postpaid

Ernest Fahlbeck
406 South Springfield Ave.
Rockford, Ill.

XUM

NEW DESIGN **Electric Uncapping Knife**

$12.00

110-130V AC ONLY

- **THERMOSTAT CONTROL**
- **EVEN TEMPERATURE**
- **FASTER OPERATING**
- **LIGHT WEIGHT**

6 ft. rubber covered asbestos cord, $1.00 extra.

Macy Electric Knife Company
INC.
1239 S. Lorena St. Los Angeles 23, Calif.

Pollen Substitutes

	1 lb.	5 lb.	10 lb.	25 lb.
Brewers yeast and soy flour expeller mixed 1 to 6		$ .75	$1.50	$3.25
Brewers yeast	$ .40	1.50	2.75	5.50
Soy flour			1.40	2.75
Skim milk powder		1.00	1.75	3.75

Write for prices in large quantities. Include postage if you wish it by parcel post. All prices are collect, Bainbridge, N. Y. Allow 2 pounds for packaging.
M. Y. S. Company Bainbridge, N. Y.

Packages **SUNKIST** **Queens**
ITALIAN

We are taking orders now for Spring 1948 delivery without deposit. Conditions are 10% deposit on order, balance 10 days before shipping after prices are established. You have privilege of cancellation.

We offer 3-banded Italians—live delivery—health certificate—SATISFACTION.

Sunkist Bee Company, Convent, La.

BEEKEEPERS NOTICE

SUPPLIES AVAILABLE FOR PROMPT DELIVERY

Order Now and Avoid Delay Later

Hives are constructed of 5/8" water-resistant plywood. Shipped KD. Hive body parts painted on outside with Uniflex guaranteed water-resistant paint.

Complete 10 fr. Hive	**$6.50**
Complete 10 fr. 5 3/8" Super	**2.60**
Complete 10 fr. 9 1/2" Super	**3.50**
Brood Frames per C	**8.00**
Super Frames 5 3/8" per C	**5.75**
UNIFLEX Paint per gal.	**3.00**

Price List Upon Request.

Mid-West Wood Products Co., Perry, Kansas

This is Addressed TO YOU MR. BEEKEEPER

Don't get in a hurry to sell your crop. Many important areas across the nation this year are experiencing a crop failure — others a near failure. Generally, the clover honey crop will be the shortest in years. Conditions do not justify unreasonably low prices.

Help us to help you.

Contact:

Sioux Honey Association
509-11 Plymouth St., Sioux City, Ia.

The Illinois Honey Producers' Association
Mt. Sterling, Illinois

The Ohio Apiaries Cooperative Association, Inc.
Route 3, London, Ohio

Finger Lakes Honey Producers Cooperative
Groton, New York

Imperial Valley Honey Marketing Association
860 F. St., San Bernardino, Calif.

Learn what Coops. are doing
Or Write the
National Council Honey Marketing Assn.
139 W. William St., Delaware, Ohio

MUCH MONEY and STILL MORE TIME

have been devoted to the improvement of the parent DR stock made available through the Iowa Beekeepers' Association.

It is a 100% Effort

to make available to honey producers the best possible DR stock.

Iowa Beekeepers Assn.
State House
Des Moines, Iowa

Three Banded Italian Queens
After June 1st
1 to 11, $1.00 each
12 to 49, .95 each
50 or more, .90 each

Because of the extremely late Spring, we cannot accept any more orders for package bees.

John C. Hogg
Apiarist
Tifton, Georgia

THE JOHN M. DAVIS STRAIN
ITALIAN QUEENS
BRED THE DAVIS WAY
Guaranteed to please

Untested	$1.25 each
Tested	2.00 each
After June 30th,	1.00 each

Untested only
Cash with order

Little's Apiaries
P. O. Box 122
Shelbyville, Tennessee
Where Quality Reigns

QUEENS Fall Queens a Specialty QUEENS
You send the order; I have the queens
LEATHER COLORED ITALIAN QUEENS
MIDDLE TENNESSEE APIARIES
1 to 25, $1.35; 26 and up, $1.20—From Imported Strains.
¼ books orders. Balance before shipping. All queens clipped and by air mail at no extra cost. (All Queens after June 15, $1.00)
J. B. TATE & SON
1029 No. 4th St., Nashville 7, Tennessee Tel. No. 34509M

A TALK TO BEEEKEEPERS

(Continued from page 604)

colonies have more brood when examined in April. At least that seems to be the case in this locality.

It is difficult to carry on experiments with bees without having at least a few preconceived ideas. We should be absolutely open-minded and unbiased.

I do think that beekeepers in the North have to determine, possibly from experience, what method they should use in wintering bees. If you are having success with your present method we advise against experimenting on too large a scale with some new method. If you are having somewhere near 100% success in wintering bees, stick to your present method, whether it consists of packing bees heavily, moderately, or no packing at all.

Some beekeepers are supplying a light packing by wrapping each hive in Siselcraft black paper, providing a top or bottom entrance, or both, and making small holes in the paper opposite the entrances for the bees to fly out and in.

Things Learned from this Past Season

If we do not learn from experience we become stagnant and get into a deep rut. There are two things I hope to do next season which I did not do this season.

First, I will get rid of worthless queens promptly instead of tolerating them with the hope that they may improve in performance. I lost some surplus honey this past season by hanging onto poor queens. We can detect poor queens by observing their brood — its quality and quantity. A queen that lays in scattered fashion instead of in solid sheets, and lays too many drone eggs needs to have her head taken off.

Second, in this locality there is usually a partial dearth of nectar between the dandelion and clover flows. Queens slacken in their laying. Next spring I expect to give each colony a 10-pound pail of thick sugar syrup—two parts sugar, one part water—just before the fruit bloom and dandelion flow ends in order to stimulate queens to maximum brood rearing, as well as to supplement any possible deficiency in stores.

Leather Italian Bees and Queens

We are booking orders for 1948 prices to be quoted later, subject to your approval. No deposit required. Every queen and package guaranteed.

The Rich Honey Farms, Jeanerette, La.

Our National Federation

Let's continue to boost and support our Federation because:

(1) It is the organization that helps to hold our industry together —it is comparable to the National Beekeepers' Council of Canada.
(2) Our Federation is interested in and works for the welfare of beekeepers everywhere.
(3) It is the mouthpiece of our industry.
(4) Money is needed to carry on the work of our National Federation. Help yourself by helping the Federation.

Send contributions to:

Sec.-Treas. Glenn O. Jones, Atlantic, Iowa.

QUEENS

Lots of Nice Young Queens for Immediate Shipment Both Italians & Caucasians

We have about finished package shipments for this season, and are devoting our entire time to the production of good queens. If you need them for queenless colonies, requeening, or making increase, we can supply your needs promptly at the following prices:

1-24	$1.10 ea.
25-99	1.00 ea.
100-up	.90 ea.

Clipped or Airmailed at no extra cost.

The Stover Apiaries

Mayhew, Miss.

York's

Package Bees & Queens
Quality Bred Italians

Balance of season prices. Plenty of bees and queens and prompt shipments.

2-lb. pkg. with queen,	$4.50 ea.
3 lb. pkg. with queen,	5.50 ea.
Queens	1.50 ea.

Booking orders now for 1948, let us hear from you with reference to your requirements for the coming season.

York Bee Company

Jesup, Georgia
(The Universal Apiaries)

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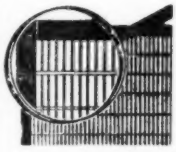

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